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**Formative Process Evaluation of the
Army Social Work Care Manager Program**

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**Formative Process Evaluation of the
Army Social Work Care Manager Program**

by

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Dedication

To every young man and woman who joined the Army to start anew and make a life for themselves despite the environment they found themselves in growing up. People do care, want you to succeed, be happy (relatively so), and to see your dreams come true. This project is done in hopes to serve you and other Soldiers in pursuit of their goals and comforts in life. Never give up, follow your heart, attach yourself to good people, and respectfully disregard negative forces. Remember...the secret to success...is good hard work...although, life is not always fair...with that attitude, in the long run your turn will come, you'll end up ahead and you will win.

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Formative Process Evaluation of the Army Social Work Care Manager Program

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Abstract: The U.S. Army has undergone extreme transformation to meet new national security needs of the nation due to the Global War on Terror (GWOT). In order to meet the needs of Soldiers and families exposed to increased stressors, the Army behavioral health system has undergone much transformation as well. The Army Social Work Care Manager Program (CMP) is one program recently developed to enhance Army behavioral health services to this population. It provides care for Soldiers and their families who experience psychological or interpersonal difficulties throughout the deployment cycle. This study investigates the ability of this new program to create effective services throughout several locations across the Army. More specifically, the study evaluates the extent to which the CMP has been implemented as intended, reaches the target population and accomplishes the intended tasks. Soldier survey data, multiple Care Manager (CM) activity reports, interviews and focus groups were analyzed in a triangulated methodology. CMPs studied were found to reach the target population and address target issues across installations; however, senior enlisted as well as white male Soldiers appeared to be exposed to trauma at higher rates than they received treatment.

Burnout, lowered health benefits, overtasking, and recommendations for program formalization through manuals were identified as areas of program development.

Table of Contents

List of Figures	xi
List of Tables	xii
Chapter I Problem Statement/Introduction	1
Historical context	1
The First Gulf War	1
New Enemy/New Army.....	2
Deaths at Fort Bragg, North Carolina.....	3
Army Mental Health Programs	4
Purpose and Significance of the Study	5
Research Questions.....	6
Value of the Study	9
Chapter II Literature Review	10
Case Management Theory	10
Introduction to Case Management.....	10
Universal Ideals of Case Management Theory	11
Assumptions and Definitions of Case Management.....	12
Tasks/Responsibilities of Case Management.....	14
Major Models of Case Management.....	15
Outcome Studies for General Case Management	17
Army Care Manager Program.....	20
History and Theory of the Care Manager Program	20
History of the Care Manager Program.....	20
Army Care Manager Program vs. Case Manager	23
Army Care Manager Program Model	26
Target Population Service Utilization.....	27

Chapter III Research Methods	33
Research Questions	33
Methods	35
Site Selection	35
Data Sources	36
Program Planner Interviews and Documents.....	37
Post Deployment Health Assessment (PDHA)	37
Care Manager Direct Service Data (PASBA).....	40
Care Manager Prevention/Outreach Activities (IMS)	41
Care Manager Focus Groups	41
Supervisor Interviews	42
Procedures.....	42
Summary	45
Chapter IV Results	46
Research Questions Results	46
Research Questions 2 & 3	46
Research Question 2	47
Research Question 3	59
Research Question 4	62
Research Question 5	65
Research Question 6	70
Research Question 1	80
Chapter V Discussion and Implications.....	83
Research Questions Discussion	83
Research Question 1	83
Research Question 2	84
Research Question 3	87
Research Question 4	89

Research Question 5	93
Research Question 6	95
Implications.....	97
Policy	97
Practice.....	100
Limitations	101
Future Research	102
Concluding Remarks.....	104
Appendix A Post Deployment Health Assessment.....	105
Appendix B Care Manager Prevention/Education Monthly Activity Report.....	106
Appendix C Care Manager Survey	107
References	108
Vita	119

List of Figures

Figure 4.1 Rank Analysis: PDHA by Percentages & Adjusted Std Residual.....	51
Figure 4.2 Ethnic Analysis: PDHA by Percentages & Adjusted Std Residual....	56
Figure 4.3 Gender Analysis: PDHA by Percentages & Adjusted Std Residual ...	58

List of Tables

Table 3.1	Care Manager Program Sites Worldwide	35
Table 4.1	Number and % of Deployed Soldiers Reporting PDHA Issues.....	48
Table 4.2	Deployed and CM Direct Treatment by Rank	49
Table 4.3	Summary of Chi-square Analyses of Soldiers at Each Rank	50
Table 4.4	Summary of Chi-square Analyses of Soldiers at Each Ethnicity	55
Table 4.5	Summary of Chi-square Analyses of Soldiers by Gender	57
Table 4.6	Percentage (and Total Number) of Deployed and Treated Soldiers.....	59
Table 4.7	Percentage of Issues Reported by Soldiers and Treated by CMs	60
Table 4.8	CM Prevention Outreach, and Education Activity	61
Table 4.9	Percentages of CM Direct Services Rank Groups	66
Table 4.10	CM Direct Care Services by Category	67
Table 4.11	Problems Treated by CMs By Installation.....	69
Table 4.12	Mission, Duties, Strengths: Focus Group Responses	74
Table 4.13	Focus Groups Unintended Effects, Improvements	80

CHAPTER I

PROBLEM STATEMENT/INTRODUCTION

The Army Social Work Care Manager Program (CMP) was implemented internationally by the United States Army Medical Department (AMEDD) Behavioral Health Division to serve combat veterans and their families in the wake of the Global War on Terror (GWOT). After two years of CMP operation, no formal attempts have been made to evaluate this mental health program. Significant historical and contextual events have occurred which make evaluation of this program timely and relevant. An evaluation of this program, as reported in this dissertation, was designed to enhance services to combat veterans and their families.

Historical Context

Several historical events that have influenced the CMP's development and implementation are significant to both the research problem and the methods chosen to address the questions introduced at the end of this chapter.

The First Gulf War. The First Gulf War (GWI) in 1990 was an unprecedented short war that involved a five-month build up and 43 days of combat. While initial casualties were low, major health concerns soon followed. Soldiers in the U.S. and other countries experienced unexplained medical symptoms, with no identifiable cause. The constellation of these symptoms, termed as the Gulf War Syndrome, emerged in the United States and other countries. It became the mystery illness of GWI (McKeehan, Clark & Ryan, 2001). The military's slow response generated political, media, and

public pressure for more aggressive attention. To provide more current accounting of the health and mental health status of Soldiers, particularly those deployed to high stress areas, the Army developed a surveillance system to record, research, and treat Gulf War Syndrome (Department of Defense, 2003; McKeehan, Clark, & Ryan, 2001; DeploymentLINK, 2001; DOD Instruction, 1997; Office of the Joint Chiefs of Staff, 2002; Post Deployment Health, 2001). Part of this surveillance is a Post-Deployment Health Assessment Survey (see Appendix A), developed by Army medical researchers to maintain health reports of Soldiers returning from war and other deployments. This health assessment includes seven mental health questions addressing degrees of combat stressor exposure, risk assessments, post traumatic stress disorder (PTSD) symptoms, depression, and family discord.

New Enemy/New Army. The threat of terrorism, as evidenced by the attacks on the World Trade Center and the Pentagon on September 11, 2001, was an unprecedented threat to national security. Small, rogue combatives that were very agile, unconventional, and had far reaching capabilities, challenged the U.S. military. These combatives were decentralized in organization, international, and did not follow conventional laws of war. Army transformation to effectively neutralize this unconventional rogue warfare was necessary. Army Secretaries and Chief of Staffs identified the GWOT as a primary offensive to continue into the foreseeable future. This new offense changed the rate, intensity, and duration of Soldier deployments and Soldier combat stressor exposure compared to recent wars, like the GWI, and other military actions, largely peacekeeping (Brownlee and Schoomaker, 2004; U.S. Army, 2003; White and Shinseki, 2001, 2003).

The increased time and intensity of Soldier experiences strained families of service members as well. Addressing these issues and maintaining the force over the term of the GWOT was a priority for senior military leaders.

Army leaders realized they had to address greater security needs of the nation. In addition to expanding national security into the foreseeable future, military families were embraced as a vital priority of Soldiers. This philosophy is reflected in the slogan, “although the Army recruits Soldiers, they retain families.” A second newly emphasized Army philosophy is that it is essential for Soldiers to know their families are taken care of so they can focus on winning wars. The Army embraced these pro family philosophies, seeking to improve family supports and reduce hardships during increased absences of Soldiers. This same 21st Century Army doctrine challenges Army social service programs to insure programs are the most effective and efficient they can be (Winkenwerder, 2004). The annual Army Posture Statement mandated the evaluation and development of such services (U.S. Army, 2003). The new enemy and the transitioning Army heightened the need for timely, tested, and effective mental health programs for Soldiers and their families.

Deaths at Fort Bragg, North Carolina. After approximately one year of combat in Afghanistan, an outbreak of murder/suicides involving Soldiers at Ft Bragg, North Carolina (Ricks, 2002) served as a wake-up call for the nation. Four wives were murdered by their Soldier spouses and three of these Soldiers committed suicide. One Army Soldier was murdered by his wife. The Fort Bragg tragedies received much media hype in the news and on TV programs such as “60 Minutes,” and “Oprah.” Emphasis on

the underlying national security issues that may exist also enhanced public and political pressures to address these issues immediately.

An epidemiological study (EPICON study) determined that deaths were not directly related to combat duty (U.S. Surgeon General, 2002); however, mental health problems and related issues were identified as contributing factors. Fragmentation of services, limited confidentiality, stigma related to receipt of services, military cultural avoidance, and career vulnerability were identified as obstacles to seeking military mental health services. The findings were used to rapidly modify the military's redeployment support program. The CMP was part of the modification.

Another issue that emerged was combat veterans who were unprepared for reunification with families and life after fighting in Afghanistan. The need to address these issues quickly and effectively was a top priority of the Army Surgeon General. Upon receipt of EPICON study recommendations, and in order to supplement services for Soldiers and their families, mandates were established to have new programs operational in a matter of months. These planning requirements quickly enhanced mental health services at Army installations internationally but left limited planning resources for the CMP and other programs. These contextual issues are relevant to the CMP development and progress.

Army Mental Health Programs

In the wake of the GWOT, the U.S. Army continues to transform itself to meet national security needs. This ongoing transformation has affected Army mental health programs. The effects of combat on Soldiers, combat stress control, and Family

Advocacy services receive considerable research attention (Adler, Wright, Huffman, Thomas, and Castro, 2002; Campbell and Valentine, 1999; DeploymentLINK, 2001; DOD Instruction, 1997; FM 8-51, 1992; Hoge et al. 2004, 2004, & 2006, Office of the Chief of Staff, 2002; Pincus, House, Christenson, & Adler, 2001; Pincus and Nam, 1999; Post Deployment Health, 2001; Richie, 2002), but there has been little attention on mental health services for combat veterans and their families (Freidman, 2004). Despite Major General William Winkenwerder's (2004) mandate to provide treatment and evaluations in a timely manner, limited evaluations have occurred in the area of Army mental health services and programs. The CMP, for example, has been fielded for two years without any formal evaluations.

Although considered conservative estimates of the psychological effects of war, service members' self reports of symptoms, researchers found rates of post traumatic stress disorder (PTSD), general anxiety disorder, and depression, to be 16% to 17% of Soldiers and Marines returning from combat in Iraq (Hoge, Auchterlonie, and Milliken, 2006; Hoge, Castro, Messer, McGurk, Cotting, and Koffman, 2004; & Hoge, Toboni, Messer, Bell, Amoroso, and Orman, 2005). These rates are twice that of pre-deployment rates (Friedman, 2004).

Purpose and Significance of the Study

The CMP was specifically designed to assist with post-war health. While the program has operated for two years, has a \$6 million annual budget, is implemented internationally at over 30 installations, and is providing a critical service to war veterans and their families; much knowledge about the program is left to speculation (Orman,

2003). A formative evaluation is necessary to establish the extent to which the program is reaching its target population, addressing target issues, and progressing as intended across installations.

The purpose of this study is to evaluate the Army Social Work Care Manager Program (CMP), using a formative improvement-focused model introduced by Posavac and Carey (2003). This is the initial formal study of the CMP and one of the most recent studies of any post deployment mental health program.

Research Questions

The objectives of this study are to understand the implementation and progress of the CMP and provide feedback for its improvement. After carefully considering stakeholders needs and desires, data accessibility, and available resources, six research questions were investigated.

Program Evaluation Questions. The first three questions pertain to formative evaluations investigating implementation.

1. To what extent is the Care Manager Program (CMP) implemented as intended? This is the most fundamental implementation question. Before outcome evaluative methods can be applied to any program, the actual program in place must be investigated and verified. Prior to that, in depth analysis is needed to determine the extent to which the program in place is the program originally planned. Measures used to answer this question include Soldier self-assessment exit surveys from combat (Appendix 1), Care Manager direct practice and prevention/education activities (Appendix 2) and Care Manager surveys (Appendix 3).

2. To what extent is the Care Manager Program (CMP) reaching the target population? This second fundamental question is intended to assess how well the program targets those returning from war that report post war mental health and family issues. To answer this question, Soldier-self assessment data were compared with characteristics of the clients served by the CMs in direct service activities.

3. To what extent is the Care Manager Program (CMP) addressing the target issues identified? This is the third fundamental question to be addressed assesses the program's abilities to target problems of Soldiers negatively affected by combat service. To answer this question Soldier reports of behavioral health issues were obtained from their self assessment exit surveys and compared to the direct and preventive services of the CMs.

Site Specific Questions. The next two questions depart from the broad or global evaluation of the CMP by analyzing information from three selected CMP sites, each using different implementation strategies. Programs implemented by large organizations like the Army often implement the program in multiple locations across great distances. Although the CMP operates primarily in the continental United States, there are programs in Germany, Korea, and Italy. Each program is different based on individual installation needs and local interpretations of installation leaders. This creates an obvious management challenge and limits bureaucratic control, resulting in variation in the actual program across sites. It is essential to program management, evaluation and development to capture and assess this variation. The next two research questions serve to compare aspects of the implementation of the CMPs across different sites.

4. How is the Care Manager Program (CMP) implemented at various installations? This question sought to discover the aspects of individual program implementation techniques such as where Care Managers are placed within the installation mental health system (venues), how they are being used, and how effective this seems to the Care Managers. Historical information and informal interviews with leader were used to determine the implementation techniques used at individual installations.

5. How do installations and implementation venues of the Care Manager Program (CMP) differ in their service to the target population? Services to the target population provided by individual program sites (or venues) were compared. Some particular concerns are the ability of smaller, more remote sites (typically serving primarily National Guard and Reserve units) to perform their duties compared to programs on large installations with higher rates of deployments and more resources. Mental health assessments and various reporting systems were used to compare the individual sites.

Care Manager (CM) Perceptions. The final research question seeks to discover the perceptions and feedback of the CMs currently working in the field.

6. What are the perceptions and attitudes of Care Managers? The question was answered through semi-structured qualitative analyses with focus groups of CMs and interviews with their supervisors.

Value of the Study

This formative evaluation of the CMP expands current literature in several ways. First, this study contributes to community mental health services management by investigating a mental health program implemented and managed on a national level. Delivering adequate and sustained mental health services to large communities is a challenge. This study reveals the effects of management choices and the ability of programs to meet goals and objectives across multiple sites at national levels.

It also serves the U.S. Army Medical Department (AMEDD) Behavioral Health Division as well as the profession of social work through the timely evaluation of the social services provided to combat veterans and their families. It is important that managers and providers understand the impact and utility of the programs they develop. This is one of the first formative implementation/monitoring studies to evaluate services, provider perceptions, clients served, and needs addressed by programs focused on post-combat needs of Soldiers. It sets the stage for future summative evaluations and establishes literature for the development of timely and fine-tuned services to combat veterans and their families. Finally, this study serves as a formative evaluation of the ability of a large-scale internationally implemented behavioral health program to attain and sustain its mission, reach the target population, and address target issues.

CHAPTER II

LITERATURE REVIEW

This chapter reviews case management theory and mental health services utilization by clientele relevant to the CMP. The mental health case management treatment approach is a unique type of mental health services delivery that specializes in coordination and integration of services. Ideals, assumptions, definitions and models of case management are introduced and a review of case management outcome studies is provided.

Case Management Theory

Introduction to Case Management. Gibelman (2004) describes case management as an approach to outpatient service provision that controls costs and produces efficiency in the delivery of mental health services. Case management is applied to many fields and yields its best returns in the coordination and integration of multiple service providers to meet the needs of clients (Davies, 2000; Gibelman, 2004; Miley, Omelia & DuBois, 2004; MacEachron, Pensky, and Hawes, 1986). Case management is a common approach in child welfare, developmental disability services, services for those with chronic mental illness, Soldiers redeploying from war, and just recently in the provision of services to Soldiers and families affected by the GWOT (Gibelman, 2004; Orman, 2003a & b; Rossi, 1998).

Case management is not unique to social work services. Case management is a health care delivery approach used in hospitals, employed in managed care, and is used

by other professions, but is most frequently used in social work and nursing (Barker, 1987; Calhoun & Casey, 2002; Gibelman, 2004; MacEachron, Pensky, & Hawes, 1986). MacEachron, Penskey, and Hawes (1986) studied case management services provided to persons with developmental disorders. They found no superiority of one profession over others in the provision of case management. Case management is essential in seeing that clients with complex problems get the multiple services they need. Soldiers participating in war often experience complex problems best treated using a case management approach. These problems include multiple physical problems, post-combat emotional problems and increased vulnerability for psychosocial problems (Rossi, 1998; Wessely, 2004). Case management programs were used during WWII to manage complex treatment cases of the war (Rossi, 1998). These complex treatment cases included multiple health problems, both physical and psychological. The Army care manager program, much like the WWII case management programs identified by Rossi (1998) was implemented during the GWOT to manage the unique and complex issues common to service members serving in times of war.

Universal Ideals of Case Management Theory. As discussed previously, case management has existed since the 1930s. Universal ideals and protocols of case management often times are secondary to establishing the delivery of complex systems of case management to specific and diverse populations. These populations range from children to the frail elderly, from war veterans to those made vulnerable through disease or accident (HIV/AIDs populations or victim of traumatic brain injury). Regardless of the specific population served or the profession providing the case management services,

this method of health and mental health delivery shares have basic theories, assumptions, definitions, and models.

Assumptions and definitions of case management. The basic assumption of case management is that it is an effective system of social service delivery for clients, clients' families, communities and agencies (Solomon, 1992). It is a method of managing available services that are disperse and, at times, fragmented and complicated for clients to understand or negotiate (Boreland, McRae, & Lycan, 1989; Chamberlain & Rapp, 1991; Davies, 2000; Rossi, 2003; Orman, 2003a & b; U.S. Army Surgeon General, 2002; Ziguras & Stuart, 2000). Rossi (2003) stresses that case management should be an independent function of service provision that does not blur the roles of specific service providers with the roles of managing the multiple services available. When roles are combined, Rossi argues, one of the services will take second stage, leaving the client to suffer. Alternatively, Garvin and Seabury (1984) identify the case manager as the professional in the service network that is responsible for coordinating activities. They oversee the planning of the treatment and coordinate various activities and actions within the complex and diverse social service network. Without case management, interagency conflicts, misunderstandings, and lack of coordination and information results in mixed messages, and at times, mixed expectations sent to the consumer. Also, clients may fall through the cracks or not get all of the services they need. It is assumed that the management of complex cases will improve services, their usage, and the timeliness of such services.

There are several definitions of case management. Solomon (1992) basically and succinctly describes the coordinated activities of case management as a strategy “on behalf of clients to obtain the services they need, when they need them and for as long as they need these services” (p. 164). Barker, provides a more elaborate definition in *The Social Work Dictionary* defining case management as:

A procedure to coordinate all the helping activities on behalf of a client or group of clients. The procedure makes it possible for many workers in the agency, or different agencies, to coordinate their efforts to serve a given client through professional teamwork, thus expanding the range of needed services offered. Case management may involve monitoring the progress of a client whose needs require the services of many different professionals, agencies, healthcare facilities, and human service programs. It typically involves case findings, comprehensive multidimensional assessment and frequent reassessment....Social workers and nurses are the professional groups most often called upon to fulfill this function. Case management is seen as an increasingly important way of limiting problems arising from fragmentation of services, staff turnover, and inadequate coordination between providers. (Barker, 1987, p. 20)

A 1992 National Association of Social Workers work group acknowledges that case management's multiple applications within social work and multiple professions make case management difficult to describe. The social work specific NASW definition of case management is:

Social work case management is a method of providing services whereby a professional social worker assesses the needs of the client and the client's family, when appropriate, and arranges, coordinates, monitors, evaluates, and advocates for a package of multiple services to meet the specific client's complex needs. A professional social worker is the primary provider of social work case management. Distinct from other forms of case management, social work case management addresses both the individual client's biopsychosocial status as well as the state of the social system in which case management operates. Social work case management is both micro and macro in nature: intervention occurs at both the client and system levels. It requires the social worker to develop and maintain a therapeutic relationship with the client, which may include linking the client with systems that provide him or her with needed services, resources, and opportunities. Services provided under the rubric of social work case management practice may be located in a single agency or may be spread across numerous agencies or organizations. (NASW, 1992)

Tasks/Responsibilities of Case Management. Effective case management requires a constellation of services. The case manager is responsible for many tasks that are identified differently by several authors, yet have a similar theme (Davies, 2000; Gambrill, 1983 & 1997; Gibelman, 1995 & 2004; NASW, 1992). Gambrill (1997) describes the roles and responsibilities of the case manager as screening, assessing,

service plan development, linking, monitoring and evaluating all services provided in a manner that fosters client success and independence. The case manager also acts in the roles of broker, advocate, and direct service provider (Gibelman, 1995). Although there is no universally accepted definition of case management, nor one model of service delivery, the definitions, roles, tasks and responsibilities establish the nature of case management practice which guide its use and its service to clients. These universal standards allow major models of case management to be effective and within professional principles of good practice.

Major Models of Case Management. Models of case management are developed to meet the needs of clients with specific issues, within communities with unique resources, by agencies with individual characteristics. Reviewing all or most models of case management is not within the scope of this paper, however case management typically falls under four major models of case management. Chamberlain and Rapp (1991) and Vanderplasschen et al. (2004) describe these four major social work case management models as (1) generalist/broker, (2) clinical/ rehabilitation, (3) strengths, and (4) intensive/assertive community treatment.

Generalist/broker model of case management. This basic model of case management is a brief model in which case managers carry larger caseloads and clients have less of a need for direct services. Typically there is little to no active advocacy with this model but assessment and referrals/linking is crucial. Typical activities of the generalist/broker model are assessment, planning, linking, coordinating, protecting those at risk, and maintenance with periodic follow-up services (Vanderplasschen et al., 2004).

This model focuses on addressing deficits in client systems and typically places much more emphasis on the assessment conducted by the case manager rather than client self-determination (Chamberlain & Rapp, 1991; Vanderplasschen et al., 2004).

Clinical/rehabilitation model of case management. Clinical or rehabilitation case management combines features of the generalist model with clinical activities (Vanderplasschen et al., 2004). This model emphasizes a formal service system, client self-determination (Chamberlain & Rapp, 1991), and empirically driven approaches to care (Freeman & Harris, 1993). This model integrates psychotherapy, psychoeducation, and intensive individual caregiving for clients in need of more intensive services than general case management.

Strengths model of case management. This model represents a paradigm shift from the dominant mental health services system that was criticized for being deficit driven and contributing to oppression. The strengths model compensates for a deficit driven health system believed to focus on individual, family, and community pathology (Rapp, 1998). This model identifies naturally occurring community, family, and individual resources with a focus on client self-determination (Chamberlain & Rapp, 1991). It follows an interpretive theory base, using narratives, artistic synthesis, and interpretations. There is a subjective/ collaborative relationship between the provider and client rather than a hierarchical/authority based relationship in this model (Freeman & Harris, 1993). In this model clients are encouraged to identify their own strengths and take control of the search for resources and direction of treatment (Vanderplasschen et al., 2004).

Intensive/assertive community treatment model of case management. As implied in the name, this type of case management provides the most comprehensive package of services directly to the client (Chamberlain & Rapp, 1991; Vanderplasschen et al., 2004). The case management team provides many services directly to clients. These intense services require lower case loads, higher individual client contacts, and an emphasis on problem identification and treatment. Client self-determination takes a lesser role in comparison to other models while case manager decisions are more central (Chamberlain & Rapp, 1991).

Outcome Studies for General Case Management. There is a need for effective brokerage and monitoring of services within the complex mental health delivery system in our nation. Without such service management clients have difficulties accessing appropriate services at critical times to reduce costs and improve mental health conditions.

Chamberlain & Rapp (1991) acknowledged the increased interest in case management services to provide these services but identified a paucity of rigorous design in outcome research. Due to the broad application of case management and diversity in programs and outcome measures, however, conclusive evidence of outcomes in case management are still being pursued and have proven to be elusive (Chamberlain & Rapp, 1991; Franklin, Solovitz, Mason, Clemons, & Miller, 1987; McRae, Higgins, Lucan, & Sherman, 1990; Patterson et al., 1999; Roberts-DeGennaro, 1993; Solomon, 1992; Ziguras & Stuart, 2000). Proper use of general case management can reduce inappropriate use of inpatient care and improve the quality of life for clients in the community. Even though these facts are well established and general case management

is widely used, evidence of its effectiveness or cost efficiency is still widely pursued (Franklin et al., 1987).

General case management outcomes have been scarcely studied in community mental health settings and where it has been studied, measures and rigor vary greatly. Franklin et al. (1987) studied general case management provided to those in need of long term mental health services. They discovered that those receiving general case management were exposed to more services, had more hospital admissions and cost more to maintain than those who received any services but case management.

After a decade of case management, Chamberlain & Rapp (1991) highlighted the inability of persons with severe mental illness to access mental health services and case management services developed to meet this service access need. This problem was also noted with Soldiers and their families within the military mental healthcare system (U.S. Army Surgeon General, 2002). In their 1991 study of such service programs, Chamberlain and Rapp discovered that outcome studies of general case management were scarce and of limited quality and generalizability. They reported little to no conformity in the studies and that outcome measures varied greatly as well. Of two studies reviewed, one used client functioning, quality of life and symptoms as measures, while a second study investigated client functioning, recidivism, hospital days, and quality of life. Chamberlain and Rapp's study revealed that there are shortcomings in identifying what exactly is being evaluated in this method of case management and generalizability and comparability can be challenging (1991).

Ziguras and Stuart (2000) conducted a meta-analysis examining 20 years of case management studies from 1980 and 1998. Forty-four controlled studies were analyzed. They reported small to moderate improvements in services when case management was used compared to usual treatment in areas of family burden, family satisfaction with services, total number of days hospitalized, and cost of care. This meta-analysis demonstrated an ability of general case management services to decrease the length of admissions and overall hospitalization days, reduce symptoms, increase clients' use of services, and increase client services. The total number of admissions and the proportion of clients hospitalized increased with general case management. Implications were that with case management service availability increased while symptoms decreased and conditions improved (Ziguras & Stuart, 2000).

General models of case management have produced mixed and modest outcomes with significant design limitations. Regardless of limited outcome findings, case management remains a mental health service delivery option that has the potential to enhance access to services, brokerage, linkage, and advocacy for clients. After the findings of restricted service use on the part of Soldiers and their families due to stigmatization, fears of reprisals, doubts about confidentiality, and fragmentation of services, the Army implemented a generalist case management program that has been in place for over two years. The program has a decentralized application and broad service area, which has resulted in a broad, yet uninvestigated, application worldwide and throughout the spectrum of military mental healthcare agencies. Evaluation is necessary to gain insight into the extent to which the program in place is what was intended and to

what extent it serves the target population and their target issues. A review of mental health program evaluation supports the design of this program implementation evaluation for this study.

Army Care Manager Program

History and Theory of the Care Manager Program (CMP). Soldiers participating in war often experience complex problems that may be best treated by case management (Rossi, 1998; Wessely, 2004). The Army care manager program, much like the case manager programs Rossi (1998) described treating service members during World War II, was implemented during the GWOT to manage the unique and complex issues common to service members serving in times of war. Social work services are vital to the reunification of Soldiers to their families and post war life. The decisions behind the CMP and its underlying theory are unique and affect the services provided and therefore the clients and loved ones served. The CMP history is outlined below as a backdrop to the program under study.

History of the Care Manager Program. In response to the attacks on the United States World Trade Center on September 11th, 2001, the Army Chief of Staff, General Shinseki, foresaw the need for enhanced support services, to include mental health services, for Soldiers and their families and wanted these services evaluated. With increased deployments and the intense activities of war reaching into the unforeseeable future, health, mental health, and family problems were predicted to be significant and inevitable consequences for service members and their families. General Shinseki directed Army leaders to posture the force to better serve the needs of Soldiers and

families. Challenges were imposed for support services to better prepare Soldiers and families for the activities and stressors of war and separation (White & Shinseki, 2001).

General Shinseki's predictions of inadequate support services in the wake of the increased military operations and family system strain were realized during a rash of homicide/homicide-suicides at Fort Bragg, North Carolina in the summer of 2002 after a year of deployments to Operation Enduring Freedom in Afghanistan. The Army EPICON study was initiated to investigate these deaths. The study revealed flawed mental health service delivery systems as contributing factors to limited mental health service use, which may have prevented the deaths (U.S. Army Surgeon General, 2002). A re-engineered Deployment Cycle Support Program (DCSP) was designed to "assist Army personnel as they return to their communities, reunite with families and loved ones, and re-establish the readiness of the force" (Army Public Affairs, 2003, p. 1). Analysts acknowledged that high rates of psychosocial distress and medically unexplained post-war symptoms had taken a toll on Soldiers and their families. They also recognized that with advanced technologies, families become "virtually deployed" with service members and experienced heighten involvement and stress from battle reports. One in seven Gulf War I (GWI) Soldiers sought war-related health care demonstrating the strains of war on participants. With preventive intervention, however, it was acknowledged that peers and leaders could identify and mitigate war symptoms and refer Soldiers for early preventive screening and treatment. Lastly, it was recognized that a concerted effort to strategically address the military cultural stigma related to receiving mental health care may diminish reluctance to seek treatment (Department of Defense DCS Initiative, 2005). The DCSP's

mission of the was to “successfully reintegrate redeploying Soldiers into their home station” (Department of Defense DCS Initiative, 2005, p 24), and its purpose was “to address, mitigate and prevent domestic violence and serve as a mitigator for GW I “type” war syndromes typically referred to as medically unexplained symptoms (MUS)” (Department of Defense DCS Initiative, 2005, p. 2).

The DCSP is modeled on a “successful aviation safety program that emphasizes the principle of redundancy of risk management efforts to minimize unnecessary and tragic outcomes” (Department of Defense CMP, 2003, p. 1). This model acknowledges that aviation operations involve “inherently higher risk (high probability of accidents and more severe consequences) than most ground operations” (Army Regulation 385-95, 1999, p. 9). To prevent catastrophic risk, organizational redundancy through interlocking and repetitive safety evaluations by separate entities is made routine. This redundancy, implemented in aviation approximately 30 years ago, reduces human error in safety management, thus reducing catastrophic mistakes (Aviation Safety, 2006). This elaborate safety model was incorporated in healthcare practices (emergency rooms, intensive care units, surgical wards, etc) to reduce human error and improve services and communication (Gaba, 2000; Rutherford, 2003; Wilf-Miron, Lewenhoff, Benyamini, & Aviram, 2003). The DCSP incorporates this model through implementation of several overlapping safety, screening, education, and direct service programs to improve risk identification and outreach services to combat veterans and their families. The Army CMP is one of the several components of the DCSP providing vital services in the

redundancy of risk management checks in military health care and behavioral health settings.

The Army CMP, as a part of the DCSP, is in place to enhance services to Soldiers and their families in the wake of the GWOT. The Army CMP “provides services primarily to high-risk Soldiers and family members in accordance with Department of Defense Post Deployment Health-Clinical Guidelines...” including the “evaluation for medical discharge, treatment of Soldiers wounded in action and their families and family members of Soldiers KIA, and deployment related medically unexplained symptoms” (Mabe, 2005, p. 1). The Chief Army Behavioral Health advisor to the Army Surgeon General identified the CMP as “critical to the success and safe redeployment of Soldiers” (Orman, 2003, p 1). Care Managers maintain a generalist case management approach by providing such services as case management, care advocacy, referral and education, behavioral health screening, assessment and specialty referrals for long-term care (Army Public Affairs, 2003). Using this model a case manager can serve a large caseload by decreasing the number of counseling sessions, identifying appropriate agency referrals, and maintaining the client in the behavioral health treatment network through follow-up, linkages, supports, and referrals. To maintain the quality of this program, Colonel Orman advises that the CMP remain well trained, supported, monitored, and evaluated for implementation effectiveness and sustainment (Orman, 2003a).

Army Care Management vs. Case Manager. The Army CMP title may be somewhat confusing; however, history, politics and context can shed light on this confusion. The CMP uses the “care manager” rather than “case manager” title which

may be theoretically and professionally misleading. This occurs because care management, as defined by Davies in the *2000 Encyclopedia of Social Work* is “the process of identifying and organizing more individualized and appropriate packages of care to vulnerable individuals requiring long-term care, usually in their own homes” (2000, p. 38). In essence, case management is seen as pivotal in the provision of long-term care which is necessary for persons with chronic mental illness, developmental disabilities, or geriatric populations. These populations have substantial limitations in levels of functioning which makes closer monitoring essential and long-term care the norm.

The care management level of care, by definition, does not correspond to the level of functioning of most Soldiers returning from war and their families. Care management focuses on intensive needs of extremely vulnerable populations. The title does not accurately represent the mission of the care manager; defined by the current program manager as “caring for Soldiers and their families with post deployment issues throughout the deployment cycle” (LTC retired Maryann Mabe, personal communication, November 11, 2005). Ms. Mabe further clarified that the care manager title does not represent the roles of their workers. She described the title as a compromise among the various health care providers in Army installations. The title of case manager has long been assigned to hospital nurses that manage complex cases in their health care settings. Since many mental health services are provided in Army hospitals and many, if not most, CMP clients would use multiple hospital services, it was prudent to select a separate and distinct title for the new Army social work positions. (LTC retired Maryann Mabe,

personal communication, November 11, 2005). Ms. Mabe described the Army social work care managers as case managers, but indicated the title of “care manager” was adopted to avoid confusion for clients navigating the Army health care system particularly when working with nurse case managers.

Orman (2003a) further elaborated the distinction of the Army CMP from typical mental health case management. Serving as the Behavioral Health consultant to the Army Surgeon General, Colonel Orman emphasized that the care managers would not be limited to the coordination and delivery of mental health services alone. Rather, CMs would assist those affected by the GWOT with any biopsychosocial condition(s) they face in returning from, or preparing for, combat. This would assist in rapidly identifying and providing services for the numerous conditions experienced after war duties, including the constellation of medically unexplained symptoms that are historically noted after war time duties and discovered at alarming rates after the First Gulf War and described in the introduction of this study (Hang, Natelson, Mahan, Lee, & Murphy, 2003; Hyams, Wignall, & Roswell, 1996; Kelsall, Forbes, Glass, McKenzie, Ikin, Abramson, Blizzard, Ittak, 2004; Wessely, 2004).

Army Behavioral Health leaders determined that the title of care manager would separate the social workers from the nursing positions, thus reducing confusion for consumers, and aptly distancing consumers from the often avoided area of mental health services by avoiding the title of case manager. Thus the title of Army Care Manager (CM) refers to broad direct and indirect services to meet the biopsychosocial needs of Soldiers and families affected by the GWOT.

Army Care Manager Program Model. The Army Care Manager Program model is similar to models described by Freeman and Harris (1993). These models do not explicitly identify their foundation and historical features, but rather this information is inferred through the analysis of purpose, characteristics, and dynamics of the models themselves. The Army CMP has unique and significant history and features. This section describes elements of the Army CMP and how they relate to case management theory.

After the study of Soldier homicide/suicide activity at a major Army base with high rates of combat deployments, there was a rapid push to “do something” to improve services and prevent such catastrophes within the Army. One result of this push was the CMP. It was developed out of general guidelines of case management and implemented under a decentralized management approach, allowing installation behavioral health commanders to place CMs within the healthcare system where they were most needed. The program was implemented under a decentralized “mutual adaptation” approach that allowed local installations to develop the program as needed while maintaining the overall program mission to assist combat veterans and their families with problems related to the cycle of deployments and general goals.

Decentralized approaches empower local leaders to implement programs to meet the unique needs of their local installations. These approaches also have the strength of building morale by delegating control to the local levels (Scheirer, 1981). Furthermore, programs implemented across several locations and large distances are often times done so under a “mutual adaptation” approach. This approach to program implementation

limits centralized controls while allowing local installations to build the program as necessary with limited guidance and oversight. It is imperative under this philosophy to evaluate programs to establish the extent to which the program is operating as intended at various sites and to develop sites and build the overall program (Greenwich, 2002).

The result of the decentralized mutual adaptation program implementation method of the CMP is the diverse, yet not fully understood, application of CMs at sites internationally. Army CMs are found in major hospitals, social work services, behavioral health, medical hold units, soldier readiness sites, and family advocacy program. Yet, after two years of implementation, it is not known exactly what the care managers do in specific and how this work differs across installations and work sites. This study examines the implementation of the CMP by discovering where CMs are placed, what activities they are conducting, how they are performing at this point, and to what extent they are serving the target population and its target issues. This study also serves as an implementation study which verifies the program actually in place compared to the program originally planned.

Target Population Service Utilization

A U.S. national study in 2003 to 2005 reported that almost 28 million adults (13% of the adult population) received behavioral health services in the past year (Office of Applied Science, 2006). In the U.S. Army, a Health Status evaluation reported that psychiatric conditions were the second highest reason for receiving healthcare, accounting for 5% of healthcare services and second to joint disorders. Behavioral health services were the most frequent outpatient visit (8%) and the most frequent reason for

hospitalization (6%) (US Outcomes Research, 2003). The military population is particularly vulnerable to behavioral health conditions in recent years due to heightened combat exposure. It is projected that over 2 million military personnel will have participated in the GWOT (Insurance Information Institute, 2006). U.S. Military studies reveal high rates of behavioral health conditions. As many as 35% of service members sought behavioral health services in the first year after deployment to operation Iraqi Freedom (Hoge, Auchterlonie, & Milliken, 2006). Often times, behavioral health conditions led to separation from service (Hoge et al., 2002). A U.S. Surgeon General report concluded that minority populations are underserved in behavioral health services (Padgett et al., 1994). It is also necessary to understand cultural and gender influences in behavioral health service utilization to maintain the best programs and services and to provide cultural and gender competent care.

In general, mental health conditions are one of the greatest health threats in the US military. They were the leading cause of discharge for men and second leading cause for women. Mental health conditions accounted for 23% of all inpatient hospital bed days and 13% of all hospitalizations. Of those hospitalized for mental health conditions, 47% were discharged from the service within six months compared to 12% discharge rate for any of the other 15 health diagnostic conditions represented in the Army healthcare reporting system. The mental health of service members is a major concern for our nation (Hoge et al., 2002). This concern is exacerbated in wartime.

However, Hoge, Auchterlonie, and Milliken, (2006) reported that 19% of all military members return from duty in Iraq self reported a mental health problem and that

35% used mental health services within one year of returning from the deployment. In comparison to this rate, the general deploying military population reports approximately 9% of behavioral health service utilization within the first year after redeployment. After controlling for age, gender, and duration of deployments the difference in service utilization between Iraq war veterans and the general deploying population remained significant (Hoge et al., 2002). The trend of increased behavioral health service utilization for combat veterans was similar with reserve forces. As many as 40% of redeploying Nation Guard and Reserve service members report mental health problems (Darwin & Reich, 2006).

Understanding the service utilization of sub-populations of clientele enhances services. Of the active-duty force, 41% are minority and 59% are White (also referred to as non-Hispanic White) (US Outcomes Research, 2003). Access and utilization of behavioral health services by ethnicity differs. Traditionally, national studies have reported low outpatient service utilization by Latinos and African Americans (Office of Applied Sciences, 2006; Ojeda & McGuire, 2006, Padgett et al., 1994). In several of these national studies, disparities remained significant even when controlling for gender. In a national study of depressed clients, Ojeda and McGuire (2006) found there was no difference in service utilization between Latino males and White males, but this may be due to a small Latino male sample. In a national insured population, Padgett et al. (1994) reported that African Americans and Latinos used fewer services than Whites. Even when socioeconomic factors were controlled, minority disadvantage in service utilization persisted with African Americans at all ages, and young Latinos also had lower odds of

service utilization (Office of Applied Sciences, 2006). However, this study revealed that behavioral health service utilization did increase from 1989 to 1999 and the increase was highest among African Americans. This is a welcome trend because historically Blacks have been found to have lower behavioral health service utilization than Hispanics and Whites (Office of Applied Sciences, 2006). In general, national studies have reported that those receiving outpatient services were more educated and of higher socioeconomic while those hospitalized had lower socioeconomic standing regardless of ethnicity.

In summary, there are ethnic and socioeconomic barriers to outpatient behavioral health services. These barriers may in fact become predisposing factors to inpatient care. This trend is evident in the military as well. Military inpatient behavioral health service increased the likelihood of discharge by 35% compared to those hospitalized for any other disease (Hoge et. al, 2002). It is important to understand and address the issues related to service utilization and ethnicity in research, program evaluation and development and practice.

Although predominantly male, the US Army is a very diverse organization with increasing numbers of women serving in a predominantly male culture (Lindstrom et al., 2006). It is essential to understand gender issues when addressing behavioral health in the Army and when developing and evaluating programs that serve Soldiers. The active-duty force consists of 85% men and 15% women and the deployed force is 89% and 11%, respectively. Psychiatric services received by the active duty force were the most frequent outpatient health service, with 11% of women and 7% of men diagnosed with a mental disorder (US Outcomes Research, 2003). In both national and Army specific

studies, there were no differences in minority men and minority women's service utilization, however, white women had a higher rate of service utilization than white males. In a national study of service utilization in 2000–2001 and 2003–2005, this trend was prominent; women were more likely to use services than men by as much as 2 to 3 (Office of Applied Sciences, 2002 & 2006). This trend was similar in the Army population. The importance of the issue is enhanced by the fact that male Soldiers are more likely to be exposed to trauma, yet less likely to receive services. One study on gender of service members and deployments revealed that women reported more psychological distress due to interpersonal stressors while men reported more mission-related stressors (Vogt, Pless, King & King, 2005).

This gender predisposition toward help-seeking interacts with ethnic factors with regard to depression, since in a study of depressed persons, White women were almost twice as likely as Latino and African American women to use such services (Ojeda & McGuire, 2006). A similar trend was found in service utilization in the military. In a sample of Gulf War I veterans, White women were also more likely to seek behavioral health services than African American women (Vogt, Pless, King, & King, 2005). These findings are consistent with the findings that African Americans are underserved in behavioral health settings. It also emphasized that women's tendency to seek treatment more frequently than men did not compensate for the African American underutilization of services. Issues of both racial and gender marginalization were theorized as contribute to the under representation of African American women in the area of mental health services (Vogt, Pless, King, King, 2005). As in the overall population, women are more

likely than men to seek and receive behavioral health treatment but this service utilization decreases for African American women. Men are more exposed to trauma, yet less likely to seek assistance. When developing future programs and evaluating current ones, it is important to understand the impact of gender on help seeking behavior and service utilization.

The CMP is a unique social work case management program that serves clients in a large complex organization of over 500,000 members. Evaluating this program is essential to ensure that clients are being served and that their conditions are being addressed. The study focuses on the extent to which this new CMP is implemented as intended, reaches its target population, and addresses target problems as identified in a sample of redeploying Soldiers. This study also reveals characteristics of gender, ethnicity, and rank of combat veterans and their reported combat exposure and behavioral health symptoms. Understanding these data when evaluating programs allows researchers and service providers to develop services tailored to better serve these subpopulations. The following chapter describes the methodology for a formative process evaluation of the Army CMP.

CHAPTER III

RESEARCH METHODS

The purpose of this study is to provide a program evaluation of the newly implemented Army Care Manager Program (CMP). After an analysis of the program background, concerns of stakeholders, and program evaluation protocol, the appropriate program evaluation methodology appeared to be a formative process evaluations with an improvement focus integrating both quantitative and qualitative data sources in a triangulated methodology. This chapter outlines the methodology of the study. It is organized into three sections: research questions, methodology, and procedures.

Research Questions

Research Questions: The goal of this study was to conduct a formative process/progress evaluation of the newly developed and implemented Army Social Work Care Manager Program (CMP). The research questions investigated were as follows:

1. To what extent is the Care Manager Program (CMP) implemented as intended? This is the most fundamental and overarching question. The question addressed the CMP' ability to meet program goals and objectives outlined and combined all data sources and findings from the other research questions.
2. To what extent is the Care Manager Program (CMP) reaching the target population? This question addressed the extent to which CMs direct clinical services and prevention activities reached those in need of services as determined by the Soldier Post-Deployment Health Assessment (PDHA). Two data sources were used to evaluate this.

The PDHA was used to identify target population characteristics and the U.S. Military electronic patient administration systems and biostatistics activity reporting (PASBA) was used to assess direct clinical services provided by CMs to Soldiers.

3. To what extent is the Care Manager Program (CMP) addressing identified target problems? This question addresses the CMP's ability to address issues of the target population. Three data sources were used to address this question, the PDHA, PASBA, and the CM Prevention and Outreach Monitoring Sheet.

4. How is the Care Manager Program (CMP) implemented at various installations? This question addresses the different ways in which local behavioral health leaders chose to implement the CMP on their installations. CM focus group, supervisor interviews and pre-study meetings with past and present administrators were used to assess these implementation trends across program sites.

5. How do installations and implementation venues of the Care Manager Program differ in their ability to serve the target population? This question addresses the ability of individual sites to reach the target population and their target issues. Data used in questions 3 were compared across installations. This data was the PDHA, PASBA, and the CM Prevention and Outreach Monitoring Sheet.

6. What are the perceptions and attitudes of the CMP Care Managers toward the CMP? CM focus groups and supervisor semi-structured interviews were conducted at selected sites to gather in-depth qualitative data about the perceptions, opinions, and suggestions of CM and their supervisors.

Methods

Site Selection. The CMP is managed by the Army Medical Department Headquarters (AMEDD) Behavioral Health Division at Fort Sam Houston, Texas. All policies, instructions, coordination, and resources are managed through this central location. There are 30 locations where CMs are located throughout the U.S. Army worldwide. Table 4.1 lists the locations of CMPs worldwide, indicating the number of CMs at each location in parentheses.

Table 3.1 Care Manager Program Sites Worldwide (Care Manager number per site)

Active Duty Fort Hood (6)	Reserve/National Guard Fort Polk (2)	Overseas Germany (4)	Medical Centers Walter Reed (6)
Fort Bragg (5)	Fort Leonardwood (2)	Italy (1)	Fort Gordon (2)
Fort Drum (2)	Fort Bliss (2)	Korea (3)	BrookMEDCEN(5)
Fort Carson (4)	Fort Sill (2)	Hawaii (1)	
Fort Riley (3)	Camp Atterberry (1)		
Fort Campbell (4)	Fort Knox (2)		
Fort Stewart (4)	Fort Eustis (1)		
Fort Benning (4)	Fort McCoy (1)		
Fort Lewis (5)	Fort Dix (1)		

Site selection for this study was conducted through program implementation data provided by program administrators at Behavioral Health Division at Fort Sam Houston, TX and preliminary study data. These data revealed that programs were implemented

under three different strategies. These implementation strategies were independent program, augmentation force, and sole provider. Three sites, one under each implementation strategy, were selected for this study. The *independent program site* was located at the largest of the installations studied, housed the largest CMP and major combat units, and contained a large Army medical center that treated war veterans with major combat injuries. The *augmentation force* program was at a major active duty installation as well. It housed large numbers of combat troops and also housed a large number of training and support Soldiers for a large Army training mission for infantry and Airborne Soldiers in the Training and Doctrine Command (TRADOC). The last site selected was the *sole provider* site that was a support installation which housed Soldiers that have missions to provide support to the combat forces. This installation had the primary movement mission to deploy National Guard and Reserve Units in a several state region of the United States. Each site selected was a strong example of its CMP implementation strategy and was feasible for this study by proximity to the researcher and access to CMs and their supervisors.

Data Sources. This study uses a triangulation methodology incorporating multiple data sources and both qualitative and quantitative research methods to answer the six research questions of this study. The data sources include meetings with program planners and program documents, a Soldier post-deployment self assessment of combat stressor exposure and behavioral health issues (PDHA), CM direct clinic services Army Medical Department electronic database (PASBA), A Care Manager Outreach and Prevention

Monitoring Sheet (IMS), CM focus Groups, and CMP supervisors interviews. These data sources are outlined below with the research question(s) that the data sources support.

Program Planner Interviews and Documents. Program planners and administrators for the CMP at the Army Department of Behavioral Health provided background data about the development and early progress of the CMP. Through these interviews, documents pertaining to program mission, goals, and objectives were discussed and program documents substantiating these data were made available. The interviews and the data they provided were relevant for historical information outlined during the literature review of this dissertation and were the program information used to answer the first research question of this study.

The Post Deployment Health Assessment (PDHA). All Soldiers participating in the GWOT and returning from Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) and some other designated peacekeeping deployment locations (Bosnia and Kosovo) participate in a population-based survey of reported health concerns (Post-Deployment Health Assessment [PDHA], Appendix 2). This confidential Soldier self-report health assessment instrument is maintained in the Electronic Defense Medical Surveillance System (DMSS) and provides demographic data and self-reported combat stressor exposure and symptoms for posttraumatic stress disorder (PTSD), depression, risk assessment issues, and other mental health and relationship issues. A sample of Soldiers completing this assessment during the 12-month period prior to monitoring the activities of the CMP was assessed for this study. These data revealed the target

population that the CMP is designed to reach as well as the rates of the target issues.

The data applies to research questions 1, 2, 3, and 5.

The instrument incorporated three questions designed to indicate a level of exposure to combat stressors or combat trauma situations for Soldiers. These questions provided an indication of the level of trauma experienced by Soldiers in combat and recorded this exposure by gender, rank and ethnicity. The next set of PDHA items measured self-reported symptoms of depression, post traumatic stress disorder (PTSD) and risk behaviors. The last question measures help seeking behavior. The seven mental health questions of the PDHA are listed and reviewed below:

1. Were you engaged in direct combat where you fired your weapon? – “Combat”
2. During this deployment did you ever feel that you were in great danger of being killed? – “Feel”
3. Did you see anyone wounded, killed or dead during this deployment? – “See”

These questions reveal combat stressor exposure in the form of seeing wounded, killed or dead somewhere in the deployment, but not necessarily during combat in the first question to feeling in danger of losing their lives to finally being exposed to direct combat at the level of intensity where they had to fire their weapon. It is assumed that this represents a continuum in the intensity of the exposure of combat stressors by participants.

4. Over the last two weeks, how often have you been bothered by one of the following problems, yes or no: - “Depression”
 - a. Little interest or pleasure in doing things.

- b. Feeling down, depressed, or hopeless.
- c. Thoughts that you would be better off dead or hurting yourself in any way.

Any “YES” response was recorded as YES. Three “NO” responses were recorded as NO for the purpose of this study and as protocol of other studies (Hoge, et al., 2006).

5. Have you ever had any experience that was so frightening horrible, or upsetting that, in the past month, you: - “PTSD”:

- a. Have had nightmares about it.
- b. Tried hard not to think about it.
- c. Were constantly on guard.
- d. Felt numb or detached.

Yes to two or more was recorded as YES. No to one or zero was recorded as NO for the purpose of this study and as protocol of other studies (Hoge, et al., 2006).

6. Are you having thoughts or concerns that you may have serious conflicts with your spouse, family members, or close friends; that you may hurt or lose control with someone or both? – “Risk Iss” A “YES” to any part of this three part question on risk behavior ideation was recorded as YES for the purpose of this study and as protocol of other studies (Hoge, et al., 2006).

These last three questions provided an indication of the symptomology of combat veterans at redeployment to the extent that they are able and willing to self disclose their health status. Lastly, there is a question indicating the participants’ desire to get behavioral health assistance:

7. Are you currently interested in receiving help for stress, emotional, alcohol, or family problem(s)? – “Help” These items provided an indication of symptomology across a spectrum of behavioral health issues. For organizational purposes, demographic analyses are presented by gender, rank, and ethnicity.

Chi-square analyses were conducted on the frequency of responses of each question of the PDHA to determine the independence of ethnicity, rank, and gender to each item to determine whether the programs were serving the population in need. Most items showed significant findings at the .01 level, however, two items met a .05 level of significance yet did not meet a $p < .01$. For these significant findings the adjusted standardized residuals within cells in the contingency table were used to determine which cells contributed to the significant chi-square distribution for each of the items (Argesti, 1996). The chi-square tables are presented in the sections they describe. Tables of differences in statistical findings across the questions of the PDHA are presented later in this study.

Care Manager Direct Service Data (PASBA). CM direct clinical services data was measured through the Army Medical Department (AMEDD) patient administration systems and biostatistics activity reporting system (PASBA) of the CMs of the three sites selected in this study. These data were comparable to those of other large health information management systems in civilian settings. Demographic characteristics such as age, rank, and gender were assessed during this study. Healthcare information assessments involved the primary diagnoses of clients served by the CMs. This serves as

a measure of actual CM services provided to the target population and for target problems. This data source is used to address questions 1, 2, 3, and 5 of this study.

CM Prevention/Outreach Activities (IMS). Tertiary activities are also monitored. Using a recently developed Prevention Information Management System (IMS) implemented by the Army Behavioral Health Division (Appendix 1), CM outreach, education, and prevention activities were documented using the CM prevention/outreach monitoring form. The measure was developed through interviews with CMs about prevention activities they conduct. It was field tested prior to its implementation in April of 2006. Activities are monitored through this information management system (IMS) with monthly reporting by installations. Program totals and comparisons across installations were conducted as a part of this study. This Care Manager Prevention and Outreach Monitoring sheet was used to address questions 1, 2, 3, and 5 of this study.

Care Manager Focus Groups. The CMs are the primary study participants. CMs are civilian social workers with a minimum degree of a master of social work (MSW) and employed on a yearly contract to provide mental health and family services to combat veterans and their families in support of the GWOT. There are 30 Army Care Manager Programs worldwide employing 69 Care Managers. Three installations have been selected to participate in this study. CMs at these locations were invited to participate in focus groups providing qualitative data for this evaluation. Focus groups consisted of semi-structured questions (Appendix 3) designed to obtain information about the CM's experiences, opinions, and suggestions in their roles at locations from each CMP

implementation strategy. Care Manager focus group information addresses research questions 1, 4 and 6.

Supervisor Interviews. Interviews of supervisors were conducted at the selected sites to gain their perceptions, opinions and recommendations about the CMP. Data from these interviews supported questions 1, 4 and 6 of this study.

Procedures

1. *Program Planner Interviews and Documents.* Interviews with managers, planners, and administrators were conducted at Fort Sam Houston prior to the initiation of this study. These key informants were available at the Army Medical Department (AMEDD) through appointment at their offices. All CMP historical documentation was provided at the time of these meetings.

2. *Secondary Data Analyses.* Data from the PHDA, military healthcare system, and the IMS prevention monitoring sheets were used in secondary analyses to understand both the target population and the actual activities of the Care Managers. This information allowed for an analysis of the target population and their needs and the ability of the CMP to address the population and their needs. These data sources, data access protocol and their question application are described below:

- a. Post-Deployment Health Assessment (PDHA). Combat veteran self-report mental health status survey data was available through the Department of the Army, Department of Epidemiological Study from the post-deployment health assessment (PDHA, Appendix 2). Department of the Army authorization was obtained through the Army Medical Department

(AMEDD) to conduct a secondary data analysis of a sample of Soldiers from this database. A sample of Soldiers completing this assessment during the 12-month period prior to the initiation of this study was accessed through the Defense Medical Surveillance System (DMSS) at the Epidemiological Study Department at the Department of Defense in Washington, DC. The Epidemiological Study Department accepted the request to evaluate Soldier responses for the period of 12-months (1 May 2006 to 30 April 2006) prior to the CM activity assessment (1 May 2006 to 31 October 2006). The agency provided overall demographic data for Soldiers and frequency data on the seven behavioral health questions of the PDHA upon request. Due to privacy protections and limited resources at the agency, individual participant information could not be released. Variables of interest in this study were Soldiers' demographics such as gender, age, rank, duty station (location of form completion), and ethnicity. Access to this information is through the Epidemiological Study Center at the Department of the Army in Washington, DC. A data request spreadsheet was prepared and provided to the researcher via secure department of defense electronic services. All privacy information was removed from the data. The researcher never had access to individual client information, thereby further protecting the privacy of subjects. Upon receipt of PDHA data, crosstab analyses were conducted to reveal any significant trends across gender, rank and ethnicity for items evaluated. These data analysis

procedures further identified target populations and significant statistical trends occurring in regard to mental health symptom reporting and combat stressor exposure. These issues were highlighted in the second and third research questions pertaining to the target population and their behavioral health problems.

- b. Military Healthcare System Records. Access to the direct services activities of the CMs was provided through the AMEDD Behavioral Health Division (BHD) at Fort Sam Houston, Texas. The BHD was requested to provide CM activity reports of the CMs from the three sites selected for the 6-month period of April to September 2006. Demographic data was gathered as well as primary conditions treated by the CMs
- c. Care Manager Prevention and Outreach Monitoring Sheet. Installations submitted a monthly record of their tertiary activities for the six-month monitoring period of the evaluation. The measure provided prevention activities and descriptive data on clients served in the way of briefings, treatment/education groups, care line contacts, outreach and education (Appendix 1). The monitoring record was submitted electronically on a monthly basis from April to September 2006.

3. *Care Manager Focus Group/Supervisor Interviews.* At the end of the monitoring period each site participating in the study was visited. CMs were invited to participate in semi-structured focus groups for further understanding of the CMP at their installations. The focus group protocol is provided in Appendix C of this study. Informed consent was

attained by all participants who had the opportunity to decline to participate at any time. Semi-structured interviews were conducted with superiors pertaining to the same subject areas as the CM focus groups.

Summary

This study used multiple measures to gain formative process and implementation data concerning the CMP. By understanding the process and implementation of the CMP, the ability of Soldiers to be served and target issues to be addressed can be recognized. Furthermore, by investigating the program at its early stages, researchers and programmers can verify the program, understand differences among program strategies, and make incremental changes to improve the program. The next chapter will report the findings of the analyses.

CHAPTER IV

RESULTS

This chapter presents the study's results. The chapter is organized by the six research questions. For organizational purposes, the first research question, pertaining to the overall program implementation, is the last question addressed because questions 2-6 reveal supporting data for this overarching question. Results for research questions 2 and 3 are presented simultaneously because the data supporting them occur concurrently in the measures used in this study (PDHA, CHCS direct care services, and the Prevention Monitoring Sheet).

Research Questions Results

Research Questions 2 & 3. Questions 2 and 3 of this study investigated 2 of the 3 central questions of program evaluation. These questions explore the degree to which the program reached its target population (Question 2), and in a parallel fashion, the degree to which the program addressed the target issues (Question 3). The CMP's overall target population is Soldiers and their families returning from war with any behavioral health problems or issues pertaining to unidentified health problems. Unidentified (otherwise undiagnosable) health problems are historically common among veterans of wars making them difficult to diagnose and treat. The focus of this evaluation is limited to Soldiers participating in and returning from war. The PDHA provided the most current information about trauma exposure and the mental health needs of this population. Although the program is available to those in any stage of the deployment cycle

(preparing to deploy, on deployment, and returning from deployment), most client problems manifest after exposure to combat stressors and at redeployment. The target population of this study was Soldiers returning from combat and completing the PDHA assessment (as required by Army policy) and there is an immediate target population of those reporting behavioral health symptoms on the PDHA after returning from war. A demographic analysis of the PDHA adds to understanding the target population and provides insight into potential target issues by identifying characteristics of this population and issues experienced at redeployment. Chi-square analyses were conducted on the frequency of YES responses of each question of the PDHA to determine the independence of rank, ethnicity, and gender across each item to answer the second research question. It identified populations who over report conditions and can be identified as vulnerable groups for service provision analysis. For these analyses, the within cells adjusted standardized residuals in the contingency table were used to determine which cells contributed to the significant chi-square distribution for each of the items. The within cells adjusted standardized residuals takes into account the large individual cell contribution of the statistical procedure, thereby controlling for the large differences in cell contribution of variables and between categories of variables (Argesti, 1996).

Research Question 2: To what extent is the Care Manager Program (CMP) reaching the target population? To assess characteristics of the CM target population, a sample of 231,978 Soldiers completing the PDHA form during a 1-year period prior to the CM monitoring period was studied. Table 4.1 reveals the overall population

frequency and percentages of combat stressor exposure and mental health issues that combat veterans reported, further defining characteristics and issues of the target population. This information will be combined with CM activity reports to indicate the degree to which the program served the target population (research question 2) and its target issues (research question 3) using CHCS direct care services reporting and the CM Prevention and Outreach Monitoring Sheet.

Table 4.1 Number and Percentage of deployed Soldiers Reporting PDHA Issues (Total N=231,978)

Number	Item	Number Yes	% of Total
1	See	104,604	45%
2	Feel	97,740	42%
3	Combat	43,564	19%
4	Depression	52,102	22%
5	PTSD	24,969	11%
6	Risk Issues	22,495	10%
7	Help	13,649	6%

Note: Deployed Soldier data provided by The Defense Medical Surveillance System (2006).

Nearly half of the Soldiers surveyed observed others killed, wounded, or dead and felt in great danger of being killed (45% and 42%, respectively) (Table 4.1). Nearly 20% of those redeploying reported being in direct combat where they fired their weapons. Soldiers reported depression symptoms at a rate of 22% and PTSD symptoms and risk issues at 11% and 10%, respectively, but only 6% of those surveyed reported interest in receiving mental health services.

Age. The age range for clients receiving services from CMs was 18 to 64. The average ages of those reporting behavioral health issues (PDHA respondents) for males were between 27 and 28 and for females it was between 25 and 27. The average age for those receiving CM direct care was 27, as was the median age for the six-month

monitoring period. The age group most often treated was 22 (modal age: n=554).

These results indicate CMP success in reaching the target population by age.

Rank. The vast majority of those deployed were enlisted personnel; 86% were enlisted personnel and 14% were commissioned and warrant officers. Therefore, enlisted Soldiers are expected to be exposed to combat stressors in greater numbers and experience more behavioral health issues. Among the enlisted deployed personnel (86% of the deploying force), 39% were lower enlisted and 47% were senior enlisted. Of those receiving direct treatment from CMs monitored, 95% were enlisted (52% lower and 43% senior enlisted respectively) (Table 4.2). The enlisted force was treated at a considerably higher rate than they deployed (86%), however this group represented with the greatest combat stressor exposure (91% of those reporting combat exposure, 89% of those reporting feeling in great danger of being killed, and 86% of those saw death and dying).

Table 4.2. Deployed and CM Direct Treatment by Rank

	Soldiers Deployed		Soldiers Treated	
Rank	%	Total #	%	Total #
Lower Enlisted	39%	90,304	52%	3,056
Senior Enlisted	47%	110,008	43%	2,573
Junior Officer	7%	16,305	4%	233
Senior Officer	5%	10,478	1%	39
Warrant Officer	2%	4,761	0%	23
Total	100%	231,856	100%	5,924

Note: No rank recorded on 252 Medical Department provider activity cases.

Note: Source – Defense Medical Surveillance System; Army Medical Department Provider Activity Reporting.

To measure significant differences among PDHA YES responses by rank, Chi-square analyses were conducted of the seven items of the PDHA Soldier Self Assessment by rank. Table 4.3 summarizes these seven Chi-square analyses.

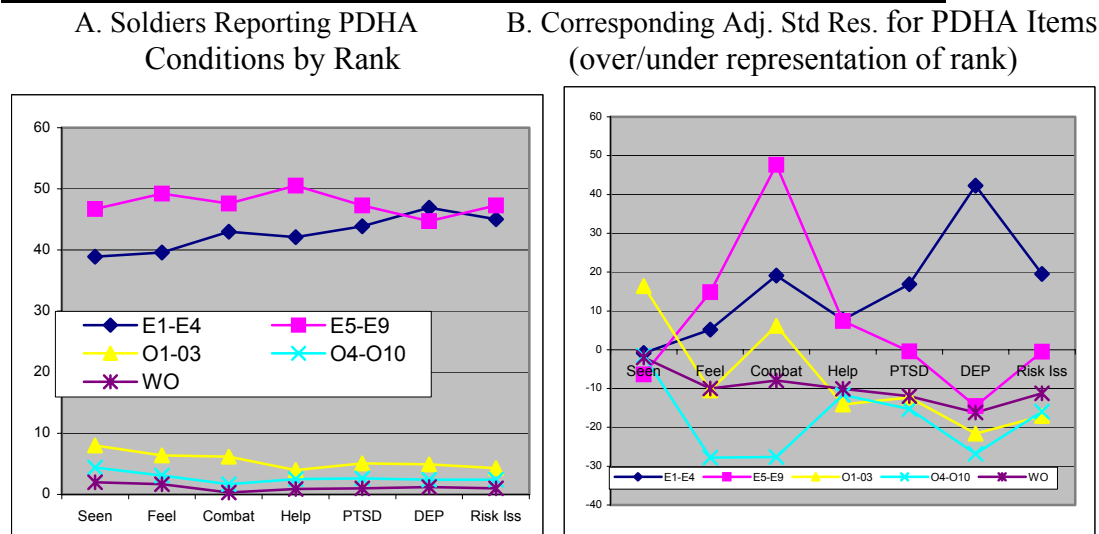
Table 4.3 Summary of Chi-Square Analyses of Soldiers at Each Rank Who Reported YES to PDHA Items

	% of YES Respondents					Adj. Std. Residual					LOS	X2	df
	E1-4	E5-9	O1-3	O4-	WO	E1-4	E5-9	O1-3	O4-	WO			
Seen	38.9	46.7	8	4.4	2	-0.8	-6.4	16.4	-1.6	-2	0	276	4
Feel	39.6	49.2	6.4	3.1	1.7	5.2	14.8	-10.5	-28	-10	0	1072	4
Combt	43	47.6	6.2	1.7	1.6	19.1	50	7.7	-31	-8	0	1279	4
Deprsn	46.9	44.7	4.9	2.4	1.2	42.3	-14.5	-21.6	-26.8	-16.2	0	2584	4
PTSD	43.9	47.3	5.1	2.6	1	16.9	-0.4	-12.1	-15	-12	0	681	4
Rsklss	45	47.3	4.3	2.4	1	19.5	-.5	-17.1	-16	-11	0	868	4
HlpSkg	42.1	50.5	4	2.5	0.9	7.7	7.4	-14.1	-12	-10	0	476	4

Note: This table summarizes the seven Chi-square statistical analyses by rank used to provide the data for figures 4.1 A. and 4.2 B. below. The table condenses the Rank * PDHA items Chi-square statistics. The table contains the percentage of Soldiers responding YES to combat exposure and behavioral health symptoms of the PDHA, the adjusted standardized residual representing the within cells contribution to the Chi-square statistic, the p value, and the Chi-square statistic for each PDHA item.

This table shows the respondent percentage of combat stressor exposure (Items 1-3) and reported behavioral health conditions (Items 4-7) and the adjusted standardized residual of the chi-square statistic. The adjusted standardized residual shows the degree to which each rank category deviates from that which would be expected by chance for each of the PDHA items while accounting for the large differences in the size of the groups. The statistic indicates any over or under representation in combat stressor exposure and behavioral health conditions. Large deviations may reveal vulnerable ranks to consider for appropriate treatment and prevention services. Lastly, the level of significance, Chi-square value and degrees of freedom are included in the table. This table supports Figure 4.1 A. and B. which are graphic representations of the rank responses across the all of the items of the PDHA.

Figure 4.1 Combat Exposure and Behavioral Health Conditions by Percentages and Adjusted Standardized Residual Separated by Rank



Note: The first chart presents the percentages of redeployed Soldiers reporting YES responses on the seven items of the PDHA by Rank. The second chart displays the within cells contribution to the Chi-square statistic, thus indicating the degree to which each cell/item was over or under-represented from that which would be expected by chance. The first three items reflect combat stressor exposure from (1) seeing dead, wounded or killed, (2) Feeling in great danger of being killed, and (3) being in direct combat where they fired their weapon. The last four items refer to mental health conditions: (4) Depression, (5) PTSD, (6) Risk Issues and (7) Interest in Receiving Help.

Figure 4.1 A. This table shows the differences in the extent to which Soldiers at each rank were exposed to combat (seen, felt, combat) compared to their reports of PTSD, depression, risk issues, and desire for help) Figure 4.1 B is a line graph of the Chi-square adjusted standardized residual across the items of the PDHA for rank as well. This figure displays the statistical over or under representation of categories of Rank from that which would be expected by chance (Figure 4.1 B).

In Figure 4.2.A, the percentage of PDHA conditions by rank category are shown. Junior commissioned officers (yellow line, O1-O3 rank), senior commissioned officers (light blue line, O4-O9), and warrant officers (purple line, W1-W4) each represent less than 10% of those responding YES to all items of the PDHA, as would be expected by their low contribution to the total numbers of those deploying and their participation in

direct combat. Enlisted Soldiers were the majority of those responding YES to all items of the PDHA. Enlisted leaders, (pink line on Figure 4.2 A, E5-E9 ranks) represented the majority of those exposed to combat stressors (47% of those seeing killed, wounded, or dead, 49% of those feeling in great danger of being killed, and 48% of those in direct combat). And although they do request some assistance, these enlisted leaders are less likely to report depression than other mental health issues. Junior enlisted Soldiers (blue line and those in the rank of E1-E4) Are the second most likely to report combat exposure on the PDHA, 39% of those report seeing killed wounded or dead, 40% report feeling in danger of dying, and 43% of those participating in direct combat.

The statistical analysis of Soldiers PDHA YES responses by rank (Figure 4.1B) also reveals that senior officers (light blue line, O1-O3 rank) and warrant officers (purple line, W1-W4 rank) are underrepresented in their combat stressor exposure compared to other ranks (first three PDHA responses) and their behavioral health needs (items 4-7). Junior officers (yellow line, O1-O3 rank) report seeing more wounded, dead or dying and a slight higher rate of direct combat than would be expected by chance. The enlisted leaders (E5-E9 ranks and pink line on Figure 4.1 B.), however, are highly over represented in their rate of direct combat and moderately over represented in feeling that their lives were in great danger, but regardless of this combat stressor exposure overrepresentation, they under report depression issues and report risk issues and PTSD symptoms at rates equivalent to that of chance occurrence. This is despite the fact that they are greatly over represented in combat stressor exposure (Figure 4.1 B. pink line).

Junior officers are statistically over represented in the number of those seeing wounded, dead, or killed during the deployment. Although junior officers are the 3rd most likely rank to report combat activity (6.2%), chi squared analysis showed that they were extremely underrepresented in reporting behavioral health issues (Depression 4.9%, adjusted standard residual (asr) –21.6; PTSD 5.1%, asr –12.3; Risk Issues 4.3%, asr –17.1) and help seeking behavior (4%, asr –14.1) (Figure 4.1 and Table 4.2). Similarly, senior enlisted Soldiers were disproportionately represented among those reporting combat stressor exposure and experiencing direct combat, however, they greatly underreported mental health issues. Although scant in reporting, this population may defer symptoms and have difficulty recognizing such symptoms. Senior enlisted experience more trauma; underreport symptoms, slightly underrepresented in treatment (Table 4.3 and Figure 4.1 A & B).

Although Senior Officers are generally engaged in low combat activities, there was a spike in direct treatment for 05 (Lieutenant Colonel) rank (n=23). E4 (lower enlisted rank) had the highest rate of treatment followed by E5 (first leader rank of senior enlisted). The enlisted ranks were those expected to have the highest rate of combat stressor exposure. Direct Services of the CMs overall appears to have reached the target population by rank. (Table 4.2)

Ethnicity. Among ethnicities, White Soldiers reported the highest rate of combat activity and seeing wounded killed or dead. However they report mental health symptoms at significantly lower rates compared to others who experienced high levels of exposure. Whites were statistically underrepresented in comparison to all other

ethnicities, which were overrepresented in reporting symptoms (Table 4.4 and Figure 4.2 A and B).

As shown in Figures 4.2 A and B, and supported in Table 4.4, Hispanic and Other ethnicities are under 10% of the population experiencing combat exposure trauma (Figure 4.2 A, yellow line representing Hispanic, light blue line representing Other ethnicities) and their statistical representation is close that which would be expected by chance or slightly below for seeing killed, wounded or dead and for participating in direct combat. These two categories were slightly over represented in feeling is if their lives were in danger (4.2 B, same color identifications). Blacks had the second highest percentage of combat exposure trauma and help seeking behavior (Figure 4.2 A, pink line across PDHA items). Their help seeking behavior peaked at 25% of the respondents while their direct combat activity was 12%, viewing of death and dying was 14%, and feeling that they were in great danger of dying was 20% of those deployed (Table 4.4, and Figure 4.2 A, pink line). Figure 4.2 B (and Table 4.4) shows that Blacks were statistically underrepresented in those participating in direct combat and seeing death and dying during the deployment, but overrepresented in seeking help and reporting depression and risk issues. Whites, on the other hand, had an opposite statistical response rate than Blacks for items of the PDHA. Whites, as the highest deploying ethnicity category were the majority of those experiencing combat exposure stressors and desire for help (Table 4.4 and Figure 4.2 A, dark blue line). However, Whites were greatly statistically overrepresented in those participating in direct combat and seeing killed, wounded or dead, yet underrepresented in those acknowledging that they felt their lives were in

danger and that they felt depression symptoms, experienced risk issues, or were interested in help. The only item for White participants that approximated what would be expected was their reporting of PTSD symptoms (63% of respondents, Adj Std Res: -7.5, $p < .000$, $\chi^2 = 95.38$, $df = 3$).

Table 4.4 Summary of Chi-Square Analyses of Soldiers at Each Ethnicity

	% of YES Responses				Adj. Std. Residual				P	Chi-	Df
	W	B	H	O	W	B	H	O	Value	square	
Seen	70%	14%	9%	6%	45	-48.6	-5.4	-3.7	0	2668	3
Feel	63%	20%	10%	5%	-19.1	11.2	11.8	5.1	0	378	3
Combat	73%	12%	9%	6%	34.9	-37	-0.9	-8.1	0	1594	3
Deprsn	62%	21%	11%	7%	-20.2	0.2	0.1	0.1	0	4.356	3
PTSD	63%	19%	11%	7%	-7.5	1.6	8.9	1.3	0	95.38	3
Rsklss	59%	22%	12%	7%	-22	15.3	12	4	0	487.2	3
HlpSkg	55%	25%	13%	7%	-26.2	21.1	12.9	2	0	753.4	3

Note: This table summarizes the seven Chi-square statistical analyses by ethnicity used to provide the data for figures 4.2 A and 4.2 B below. The table condenses the Ethnicity * PDHA items Chi-square statistics. The table contains the number of Soldiers reporting conditions/experiences, the percentage of Soldier reporting combat exposure stress exposures and behavioral health issues by ethnicity, the Chi-square adjusted standardized residual representing the within cells contribution to the Chi-square statistic, the p value, and the Chi-square statistic for each PDHA item.

* Note: Ethnic breakdown was not available for CM Activity.

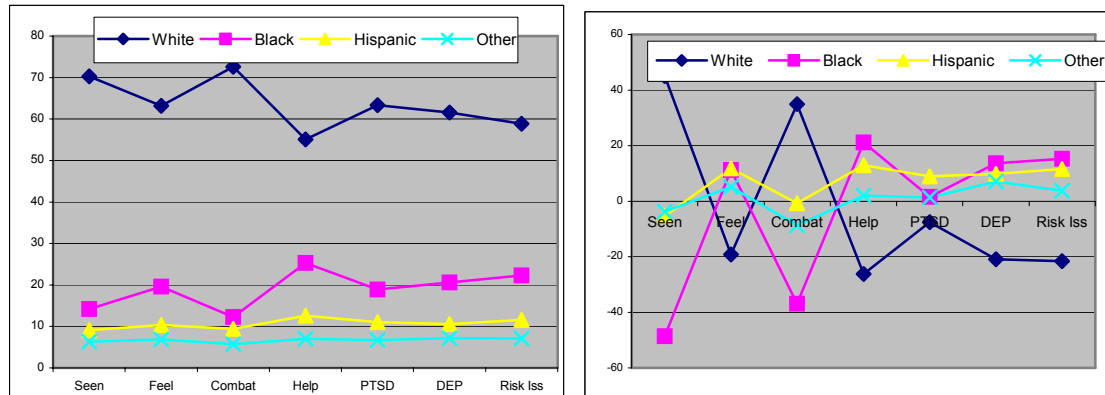
Source – Defense Medical Surveillance System; Army Medical Department Provider Activity Reporting

Figure 4.2

Combat Exposure and Behavioral Health Conditions by Percentages and Adjusted Standardized Residual Separated by Ethnicity

A. Soldiers Reporting PDHA Conditions by Ethnicity

B. Corresponding Adjusted Standard Residual (over/under representation of ethnicity) for each PDHA Item



Note: The first chart presents the percentages of redeployed Soldiers reporting YES responses on the seven items of the PDHA by ethnicity. The second chart displays the within cells contribution to the Chi-square statistic, thus indicating the degree to which each cell/item was over or under-represented from that which would be expected by chance. The first three items reflect combat stressor exposure from (1) seeing dead, wounded or killed, (2) Feeling in great danger of being killed, and (3) being in direct combat where they fired their weapon. The last four items refer to mental health conditions: (4) Depression, (5) PTSD, (6) Risk Issues and (7) Interest in Receiving Help.

For understanding the target population, it is clear that the rates of reporting combat stressor exposure were far greater than the indication of any mental health conditions. It is understood that not all of those experiencing even the greatest of combat stressors will develop mental health problems. However, under reporting of mental health conditions and need for help in comparison to their exposure was universal among ethnic groups and most evident among Whites (Figure 4.2 A and B).

A large proportion of the target population was White as determined by their identification of issues and combat stressor exposure, but a considerable number of those deploying was persons of color (35%). Data regarding CM activity provided for this study did not provide thorough ethnic breakdown of the data. The extent to which the

CMP reached the target population in terms of ethnicity is, therefore, beyond the capabilities of this study.

Gender. The deploying force over the course of the study was 89% males and 11% female (males were 86% of the active duty force). Nearly 3% of these females revealed seeing killed wounded or dead, 3% felt in danger of losing their lives and 1.8% reported experiencing direct combat during the deployment. Nearly 13% of those expressing interest in receiving mental health assistance were female, 87% of those reporting interest in help were male. Males accounted for the vast majority of those reporting mental health conditions; 88% of those reporting depression symptoms, and 90% of both those reporting PTSD symptoms and risk issues. (Table 4.5 and Figure 4.3 A).

Table 4.5 Summary of Chi-Square Analyses for PDHA YES Responses by Gender

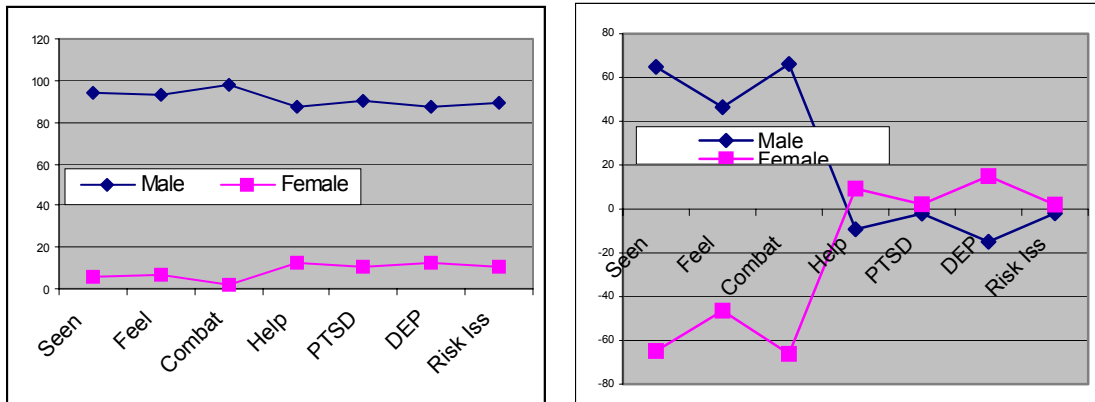
	<u>% of YES Respondents</u>		<u>Adj. Std. Residual</u>		<u>LOS</u>	<u>X2</u>	<u>df</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>			
Seen	94	6	64.8	-64.8	0	4198	1
Feel	92.9	7.1	46.4	-46.4	0	2150	1
Combt	98.2	1.8	66.2	-66.2	0	4382	1
Deprsn	87.7	12.3	-14.9	14.9	0	223	1
PTSD	89.8	10.2	2.1	-2.1	0.1	4.33	1
Rsklss	89.1	10.9	-2	2	0.1	3.83	1
HlpSkg	87.1	12.9	-9.2	9.2	0	85	1

Note: This table summarizes the seven Chi-square statistical analyses by gender used to provide the data for figures 4.1 and 4.2 above. The table condenses the gender * PDHA items Chi-square statistics. The table contains the percentage of the total YES responses for combat stressor exposure (Items 1-3) and behavioral health problems, the adjusted standardized residual representing that cells contribution to the Chi-square statistic, the p value, and the Chi-square statistic for each PDHA item.

Figure 4.3

Combat Exposure and Behavioral Health Conditions by Percentages and Adjusted Standardized Residual Separated by Gender

A. Soldiers Reporting PDHA Conditions by Gender B. Corresponding Adjusted Standard Residual (over/under representation of genders) for Each PDHA Item



Note: The first chart presents the percentages of redeployed Soldiers reporting YES responses on the seven items of the PDHA by Gender. The second chart displays the within cells contribution to the Chi-square statistic, thus indicating the degree to which each item was over or under-represented from that which would be expected by chance. The first three items reflect combat stressor exposure from (1) seeing dead, wounded or killed, (2) Feeling in great danger of being killed, and (3) being in direct combat where they fired their weapon. The last four items refer to mental health conditions: (4) Depression, (5) PTSD, (6) Risk Issues and (7) Interest in Receiving Help.

Figure 4.3 A and B supported by Table 4.5 reveals that males (blue line Figure 4.3) were the vast majority of those experiencing combat stressor exposure (Items 1-3) and reporting behavioral health issues (Items 4-7). However, Chi-square statistical analyses of the YES responses of the PDHA revealed that males report more combat exposure and under reported all behavioral health issues of the PDHA (Figure 4.3 B, blue line). So despite male respondents disproportional exposure to combat stressor exposure, they still consistently under report behavioral health issues. This lack of reporting represents probably under identification and service provision to males who have been exposed to combat trauma.

CM activity records indicate that of those receiving direct care, 85% (n=5243) were male and 15% (n=933) were female (Table 4.6). In addition, females, who were generally more likely to request and seek treatment, were more likely on average to do so within the CMP during the six months of this study. Although males experience combat stressor exposure at a far greater rate, they remain under represented in treatment.

Table 4.6 Percentage (and Total Number) of Soldiers Deploying and CM Direct Treatment

Gender	Soldiers Deployed		Soldiers Treated	
	%	Total #	%	Total #
Male	89%	207,493	85%	5243
Female	11%	24,485	15%	933
Total	100%	231,978	100%	6176

Note: Source – Defense Medical Surveillance System; Army Medical Department Provider Activity Reporting

Research Question 3: To what extent does the Care Manager Program (CMP) address the target issues? Critical symptomological data was derived from the 231,978 Soldiers deployed and responding to the mandatory PDHA assessment. These questions allowed comparisons of exposure rates and symptom reporting among Soldiers to the activities of CMs. The PDHA assessed Depression, PTSD symptoms, risk issues and interest for behavioral health or relationship issues. CMs direct care services recording (from the Army Medical Department Healthcare Reporting System) revealed diagnoses treated. Of all conditions reported by Soldiers, 52% were depression, 25% were PTSD, and 23% were risk issues (Table 4.7).

Table 4.7**Percentages of Issues Reported by Soldiers and Treated by CMs**

	% Soldier Self Report (PDHA)	% Soldiers Treated (CHCS)
Behavioral Health Issues		
Depression/Mood Issue	52%	10%
PTSD	25%	20%
Risk Issues	23%	n/a
General Counseling	n/a	29%
Adjustment Reaction	n/a	22%
Stress and Anxiety	n/a	6%
Interpersonal	n/a	6%
Other	n/a	7%
Total	100	100%

Note: n/a indicates categories not recorded in the measure.

Analysis of CM direct care activities revealed that most treatment was recorded conservatively, with diagnoses of general counseling (29%) followed by treatment of adjustment reactions (22%). PTSD was diagnosed in 20% of the counseling services. Mood disorders and depression accounted for 10% of the treatment followed by interpersonal issues (6%) and anxiety and stress reactions (6%). Seven percent of the conditions treated by CMs during the six-month monitoring period were other conditions such as medical conditions, substance use conditions, and head injuries (Figure 4.7).

CM duties are not limited to direct care activities. Prevention, education and outreach are included in the care managers' duties and addressed behavioral health and relationship needs of Soldiers. Monitoring of care managers' tertiary activities shows that over 6000 people were served, including Soldiers, family members, leaders, and providers (on and off of the installation). These services included post-deployment debriefings, medical discharge classes, family re-integration after deployment classes as well as classes pertaining to behavioral health conditions. Furthermore, CMs educated

other mental health professionals, such as medical interns, physicians, general medical providers on how to best serve Soldiers with behavioral health issues through training, outreach, and consultation. Briefings to families and Soldiers were tailored and delivered individually and pertained to such target issues as family-relational issues, coping with PTSD, and post-war health concerns of seriously injured Soldiers. These services can be broken down into categories of briefings, treatment prevention groups, outreach/command consultation and care line contacts. (Table 4.8)

Table 4.8 Care Manager Prevention, Outreach, & Education Activity: Clients Served (# of Meetings)

	Totals
Briefings	5987 (90)
Support Groups	189 (51)
Outreach	97 (40)
Care Line	49 (49)
Totals	6322 (230)

Note: Source –Army Medical Department Provider Prevention Activity Reporting

Briefings were the most commonly occurring of all CM activities and reached nearly 6000 Soldiers. Support groups covered family-relational reintegration issues, medical discharge, and PTSD/adjustment issues and reached nearly 200 service members. This particular activity was shared with other behavioral health programs and covered topics and personnel not already being addressed by other agencies. In addition, CMs were involved in substantive outreach, whereupon leaders or other providers received consultations or were cross-trained or consulted in behavioral health issues. These outreach activities served nearly 100 personnel (Table 4.8).

Lastly, staff at the independent program site established an outreach program to reach personnel who may be resistant to more conspicuous contacts. They established a care line that provided screening, education, and referral on an immediate and anonymous basis. Several of these contacts led to crisis intervention, but the vast majority led to consultations and referrals for those who may have resisted inquiries due to fears of stigmatization. During the six-month period, 49 persons (some Soldiers, some family members) were served through the independent program site's anonymous care line service (Table 4.8). During this six-month monitoring period, almost as many persons were reached in prevention and outreach capacities as through direct services.

Research Question 4: How is the Care Manager Program (CMP) implemented across various installations? The CMP was implemented under “mutual adaptation,” which is a commonly used program management approach. This approach to program implementation creates broad guidelines and allows local management to implement the program as needed within established parameters. The CMP was established with broad goals, CMs were hired through contractors, and the program was funded and staffed at power platform installations. Power platforms are major centralized installations where U.S. Army deployments are orchestrated both in and outside the United States. Because all deploying Soldiers pass through power platform installations, they are ideal locations for CMs to provide enhanced screening and services. The CMP was locally organized and implemented by senior leading behavioral health staff in these installations.

Based on previous inquiries by the Army Department of Behavioral Health, three general CMP management strategies were recognized across the power platforms. These

strategies were independent program, augmentation force, and sole provider. This study investigated one installation representing each of these management styles. The independent program was integrated within the large community of mental health programs on its installation. These programs include Social Work Services, the Department of Behavioral Health, Psychiatric Services, Division Mental Health and Hospital Case Managers. The independent CMP strategy works independent of and in conjunction with these programs to reach their target population. The sole provider site represented power platform installations that served reserve units' deployment activities. Such installations process and coordinate transportation for National Guard and Reserve units to deployment locations. Processing includes records verification, mental health education and screening, legal consultations, pay issues, etc. These programs have smaller staffs, often times just one or two CMs. Lastly, the augmentation force represented the third management implementation style whereupon CMPs are dispersed throughout the community of installation mental health agencies and serve as an augmentation force. Under this strategy, behavioral health agencies and medical units are augmented with CMs. A major combat unit received two CMs that work out of their health clinic and visit units for behavioral health training. They also augment hospital social work services on their installation.

Independent Program. This program had the highest number of staff as well as a supervisor solely assigned to them. It exists on the largest installation, which has a major medical center (MEDCEN). The MEDCEN increases the volume of activity and the number of injured and traumatized Soldiers returning to the installation and referred to

CMs. The actual CMs are not located centrally. Rather they are placed at strategic locations within the healthcare system throughout the post. CMs are at medical clinics and demobilization centers. Monthly meetings of all the CMs are conducted for continuity. The supervisor is located in the installation Department of Social Work Services, along side other program leaders.

Argumentation Force. This CMP strategy represented an implementation philosophy that augmented agencies in an effective pre-existing system of behavioral health care to Soldiers and families. A very experienced supervisor was selected to supervise CMs as an additional duty to her present management requirements. The three CMs were placed in troop medical clinics (embedded within a large military unit) and the hospital.

Sole Provider. Many power platform installations with CMPs are active duty or reserve installations that serve the deployments of Reserve and National Guard units. These installations may have less activity and the units do not remain localized after redeployment. This being the case, fewer CMs (and often just one CM) are assigned to augment mental health services. In these cases, available supporting locations are sought to enable the CM to perform his/her duties and receive clients. In the case of the sole provider site in this study, the CM was placed at the installation hospital, and later, in the Army Community Services building. The CM was moved so his direct services clients could receive reception, intake paperwork, and waiting room services, which was not available to him at the hospital. He also was given resources and office space at the demobilization site as he provided a high percentage of services there.

Based on provider focus group and supervisor interview data, these three implementation strategies-- independent, augmentation, and sole provider-- resulted in very similar programming. Irrespective of the implementation style, CMs were all placed forward in units, separate and unique from other behavioral health services, and aptly designated for duties to those with combat experiences and post-deployment problems. All sites studied were integrated into the healthcare systems and differed greatly from stereotypical behavioral health services. In all cases, CMs were able to establish informal/ less stigmatized routes to treatment as well as formal appointment/office calls for counseling services.

Research Question 5: How do installations and implementation venues of the Care Manager Program (CMP) differ in their service the target population? This question addressed how each CMP reached the target population and addressed target issues. Males were 89% of the deploying population and constituted 85% of those treated. Individual installations closely mirrored this average. Of clients served with direct mental health services 86% were male clients at the independent program site, 81% at the augmentation site, and 85% at the sole provider site. The average age for those receiving treatment at the various installations however, was 29 at independent program and augmentation sites and 27 at the sole provider site.

Direct service breakdown by rank revealed that 95% of the services were provided to enlisted personnel overall. The independent program site's enlisted percentage was 95%, with the sole provider and augmentation site receiving 92% and 96% direct services, respectively. Enlisted Soldiers were treated at higher rates than their

presence in the overall population across installations. For the other service members, commissioned and warrant officers receiving (O1-O3, O4-O6, & WO), the percentage of the treatment received was small for the 6-month monitoring period due to higher proportion of enlisted personnel in the force (Table 4.9).

Table 4.9 Percentages of CM Direct Services Rank Groups

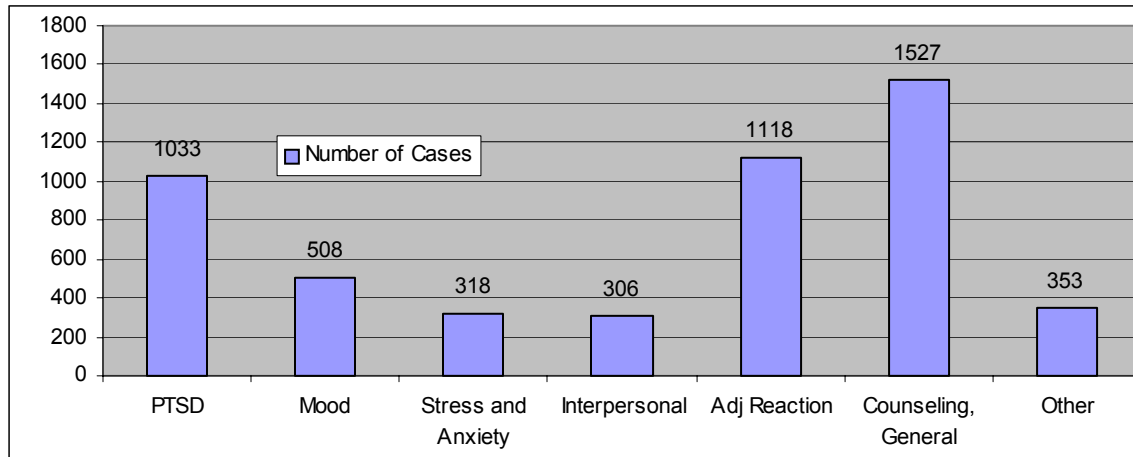
Rank	Independent	Sole Provider	Augmentation	Total
E1-E4	55	54	58	55
E5-E9	41	38	38	40
O1-O3	3	6	3	4
O4-O6	0	2	1	1
W	1	0	0	0
Total %	100	100	100	100

Note: Source – Army Medical Department Provider Activity Reporting.

Not only was the CMP implemented in three unique strategies, it was also implemented at three installations with very unique program characteristics. Both the target population and their needs reflect the characteristics of their installations. A cycle of deployment was one such factor. If an installation recently returned from deployment, the CMs will be engaged in unit prevention education, screening, and direct services. If the installation is between deployments, then cases needing intensive services may be lower in number. The size of the installation is another key installation characteristic. A final important installation is the Soldiers they serve as a power platform. If the power platform they serve consists of reserve/national guard units, then much of the target population will disperse to the states they originated from and other behavioral health services will address the long-term needs of its target population. The ability of each of the program strategies to meet the needs of their target populations will be presented by installation. Figure 4.5 reviews the overall breakdown of CM direct services and Table

4.11 displays a complete diagnostic account of treatments by the DMS IV categories further illuminating the clinical services CMs provide.

Table 4.10 Care Manager Direct Services by Category



Note: Source – Defense Medical Surveillance System; Army Medical Department Provider Activity Reporting

Independent Program Site. The independent program site was located on the largest military installation and with second largest troop population and numerous combat units. The units on this installation were also in the midst of heavy troop movements, both departing and returning from combat duty. And lastly, this was the only installation of the CMP sites studied that had a major medical center (MEDCEN). The MEDCEN serves as a treatment site for complex medical evacuees that the other installations could not serve. All these factors increased the likelihood and intensity of conditions of the target population in comparison to the other sites studied.

At the independent program site, PTSD cases constitute the largest group of cases (27%). This was the highest PTSD treatment rate across installations as well. Adjustment disorder diagnoses were coded for 18% their direct care followed by mood disorder treatment at 10% (equal to the augmentation site). Lastly, stress/anxiety

conditions and interpersonal problems both accounted for 4% of their treatment. (Table 4.11).

Augmentation Site. The augmentation site was on an installation of combat units that began a major deployment cycle approximately two years prior to the study during the initial stages of Operation Iraqi Freedom. During these stages the casualties were low and there was little combat activity. Exposure to combat stressors was low in comparison to the activities of installations on recent deployments like the independent program site. Currently, several units of the augmentation site were preparing for another deployment cycle.

The augmentation site used the adjustment reaction diagnosis most frequently (40% of those receiving direct treatment on their installation). Stress and anxiety was the second most frequent condition treated (14%), followed by interpersonal issues (14%), mood disorders (13), and lastly PTSD accounted for 7% of treatment. Lower rates of more complicated conditions (PTSD/Mood disorders) may be associated with the time since experiencing combat (Table 4.11).

Sole Provider Site. The sole provider site was located on a smaller installation which housed support units and also served as the only power platform of this study that served reserve/national guard units. At the sole provider site, general counseling accounted for 87% of treatment, followed by 4% adjustment reactions, 3% PTSD, and 2% both Stress/anxiety and mood disorders. The sole provider site reported the lowest rate of PTSD and Mood disorder treatment, and coded most contacts as general counseling and adjustment disorders. Active duty units on this installation were support

units and likely not exposed to the combat activity of the other installations studied. This may account for the lower rates of PTSD treatment. (Table 4.11)

Table 4.11

Problems Treated by Care Managers By Installation From 1 MAY to 31 October 06: Total/(%)

Diagnoses & Disorders	Independent	Augmentation	Sole Provider	Total
1. Disorders of Childhood	7 (0%)	1 (0%)	6 (0%)	14 (0%)
2. Delirium, Amnesias, Cognitive	25 (.8%)	0 (0%)	0 (0%)	25 (0%)
3. Gen. Medical Condition Root	5 (0%)	1 (0%)	0 (0%)	6 (0%)
4. Substance-Related	2 (0%)	11 (0%)	1 (0%)	14 (0%)
5. Psychotic Disorders	1 (0%)	0 (0%)	1 (0%)	2 (0%)
6. Mood Disorders	330 (10%)	141 (13%)	37 (3%)	508 (8%)
7. Anxiety Disorders, Stress Rctns	136 (4%)	154 (14%)	28 (2%)	318 (5%)
7.b. PTSD	902 (27%)	78 (7%)	53 (5%)	1033(17%)
8. Somatoform Disorders	0 (0%)	0 (0%)	0 (0%)	0 (0%)
9. Fictitious Disorders	0 (0%)	0 (0%)	0 (0%)	0 (0%)
10. Dissociate Disorders	4 (0%)	0 (0%)	0 (0%)	4 (0%)
11. Sexual and Gender Identity	0 (0%)	0 (0%)	0 (0%)	0 (0%)
12. Eating Disorders	0 (0%)	0 (0%)	0 (0%)	0 (0%)
13. Sleep Disorders	37 (1%)	5 (0%)	0 (0%)	42 (0%)
14. Impulse Control Dis NEC	8 (0%)	9 (0%)	0 (0%)	17 (0%)
15. Adjustment Disorders	596(18%)	448 (40%)	74 (4%)	1118 (18%)
16. Personality Disorders	17(.5%)	2 (0%)	6 (0%)	25 (0%)
17. Interpersonal Issues	144 (4%)	154 (14%)	8 (0%)	306 (5%)
18. General Counseling	0(0%)	1 (0%)	1526(86%)	1527(25%)
19. Other Conditions	158 (4%)	20 (2%)	0 (0%)	178 (3%)
20. Observation	26 (.8%)	0 (0%)	0 (0%)	26 (0%)
21. Diagnosis Left Blank	913(27%)	85 (8%)	6 (0%)	1004(16%)
Totals	3312 (97.1)	1110 (98%)	754 (100%)	6176 (97%)

Note: Source – Army Medical Department Provider Activity Reporting. Rounding of % decreased total % values.

Overall the CMPs addressed target issues, but their treatment rates of conditions differed greatly across the sites studied. As likely needed by the target population, the rate of PTSD treatment was highest at the independent program sites (27% of treatment compared to 7% and 5%). The sole provider site reported higher rates of general counseling and lower rates of more serious conditions (PTSD/Mood disorders) than the other installations. This too may be attributed to installation characteristics. This installation does not house combat arms troops (rather support activity units) and

reserve/national guard units exposed to higher degrees of combat stressors soon return to their local installations and are served by other agencies. Treatment rates by conditions differed greatly across the installations studied. The differences in the treatment rates, however, are associated with unique characteristics and needs of units of the installation.

Research Questions 6: What are the perceptions and attitudes of Care Managers (CM)?

Semi structured focus groups were conducted at each installation to ascertain the perceptions, attitudes and experiences of the CMs themselves. Semi structured interviews of CM supervisors were also part of the qualitative data used in this multi-method evaluation. The overarching topics of discussion were 1) The perception of the mission of the CMP; 2) The duties they perform; 3) The strengths of the program; 4) Unintended effects they perceived with the program; 5) Areas of improvement and recommendations; and 6) Any final comments concerning the program. Three focus groups were conducted at the three CMP implementation strategy sites for this study. All CMs at each of these sites were invited and agreed to participate in the focus groups. There were eight CMs at the independent program site, three at the augmentation site, and at the sole provider site, only one CM was employed. All CMs consented to participate in the study. All participants were Licensed Clinical Social Workers in the states where they worked. Content analysis was conducted to explore the themes of the focus groups and interviews. Phrases from focus groups and interviews were clustered by themes, creating categories and meaning. These themes are described below and tables 5.12 & 5.13 represent significant comments by installations for each of the six major questions addressed during the CM focus groups.

Mission, duties, and mission accomplishment. CMs, regardless of installation and implementation method, had a strong understanding of the CMP's mission. The independent program and augmentation site CMs came very close to defining the mission verbatim. The sole provider site participant understood the mission of the program, yet defined it through duty descriptions and the strengths and unique restrictions to the CMP (Table 4.12 # 1). All CMs understood that this program focused uniquely on Soldiers in the deployment cycle and their families (Table 4.12). They understood the program was designed to provide outreach to Soldiers and families vulnerable to health and mental health conditions due to combat stressor exposure. They developed programs to meet this unique mission and to reach out to Soldiers that otherwise might "slip through the cracks" as described by a CM at the independent program site. CMs duties included meeting medically evacuated Soldiers at the airport (MEDEVACs), working as counselors imbedded in units in health clinics, with deployment and redeployment screenings, and re-evaluated Soldiers after a readjustment period had passed (Table 4.12 # 2). The Sole Provider CM relayed a comment from a dual Iraq and Vietnam War veteran that illustrates the perceived unique value of the CMP:

When I first started at (the installation prior to the sole provider installation) I met a lot of National Guard and Reserve members that were also Vietnam War Veterans. They would sit there and say I cannot believe you are talking to me because they remembered Vietnam and no one was ever there for them when they got back. So there are Guard/Reserve members who as soon as they got back they had to be seen. (Sole Provide Focus Group, December 2007)

CMs reported very thorough understanding of the CMP and appeared to embrace and meet that mission. Commands respected this mission and restricted taskings to meet

program scope. This was accomplished by placing CMs in new positions. Examples of these positions were imbedded in units and at access points to Soldiers including in unit medical assets and at health screening sites and meeting MEDEVAC flights. All commands also restricted CM clients to combat veterans as required in CMP policy.

CMs described pride in fulfilling the outreach mission to Soldiers sacrificing so much for the nation's defense needs. One CM from the independent program site reported that the program provides services that other programs can not provide by being available within the units and very easy to access. This niche was further described in the unique ability of the CMP to provide outreach to combat veterans, to make direct appointments after reaching out to Soldiers at medical units and screening locations, and meeting high risk Soldiers at MEDEVAC flights and bringing services to them. CMs, as well as their supervisors, felt that they were accomplishing the mission of the program, and described both unique strengths and weaknesses of the program.

Strengths. CMs describe the program strengths in both simplistic terms and in specific detailed ways. CMs from the augmentation site described the program's unique mission as a "neat way to work" (Augmentation Site Focus Group, December, 2007, p. 2) because of their placement in the regular health clinics. This is described as a unique strength because the stigma of entering a behavioral health clinic (as the case at the sole provider site) or the behavioral health floor of the hospital (independent program site "going to the 4th Floor" stigma) of traditional mental health services is removed. CMs can serve as a provider, a consultant and as described by an augmentation site CM, a member of the military unit "family." In other words, this program reaches Soldiers and

their families in nontraditional ways. Being imbedded in unit health clinics, behavioral health stigma is reduced; services appear informal and are in fact, less obvious. The independent program site coined the name "deployment specialists" to reinforce the focus on their experiences and reducing "conditions of mental health" as the focus of care.

CMs at the augmentation program site identified their roles with families as a unique strength of the CMP. A mental health Family Advocacy Program (FAP) exists on Army installations, however this program has limitations. The FAP program is a family discord referral program that serves families in crisis, after a serious event has come to the attention of commands and/or local law enforcement. The CMP, however, is able to serve families in a preventive capacity, before abuse or severe discord emerges. As a result, the CMP is a military program that is easily accessible for families and Soldiers before problems reach crises states.

All CMs report flexibility as a core strength of the program. Reports of creating classes, restructuring briefing delivery for command concerns, and freedom to reach out to Soldiers in new ways are examples of flexibility in the program. Often CM activity depends on the activities of units and the deployment cycle of the installation. The CMP can limit direct services to focus on education and screening depending on unit needs and installation deployment cycles. They are not bound to the office, since outreach may be necessary and timely. Furthermore, in some cases a CM will have offices at multiple work sites to be more available for Soldiers.

Another unique strength of the CMP is their non-military status. All CMs felt that Soldiers were more comfortable discussing conditions and some unit conflicts with a

provider that did not have the direct military link that an active duty provider has.

According to the CMs, clients often times perceive uniformed military providers to be unable to separate unit issues from Soldiers needs. Programs imbedded in units, but with non-uniformed providers, creates perceived less threatening environments with equally skilled treatment providers (Table 4.12 #3).

Table 4.12

Mission, Duties, Strengths Focus Group Responses for Site Visited

	Independent Program	Augmentation Site	Sole Provider
1. Mission	To assist Soldiers and families w/ deployment/redeployment issues in regards to all deployment related issues Can do services that no one else does Quickly became very clinical-with a Direct treatment emphasis, see # 2.	To work with Soldiers and family members with deployment related behavior problems Don't repeat services already provided by other agencies	Very vague description provided The program became very Clinical: See item 2
2. Duties	Changed a lot quickly original-screening, referral, eval for unidentified med conditions Advocacy, linking, teach self advocacy Heavy direct service individual therapist, care coordination Bfgs, deplymnt/redeplymnt readiness assessments, Medical evacuations	Initially thought prevent, consults advocacy, education, direct serv-- classes, briefings, consults. Now, direct services with indivdls families and groups Also Sold Readiness Prg (SRP)& Reverse SRP (Pre- and Post deployment screenings & brfgs)	Like a private practice more clinical Work at SRP site with referrals from Pas 90 day Soldier group briefings prevention/education outreach cool kids group developed, but no participation
3. Strengths	Doing great, and as intended Key that we are in the clinics It fills a niche Catches Sold. otherwise missed or would fall thru the cracks Better at reaching out to S that BH Gets rid of stigma Separate from Behavioral Health Emphasizes families More career safe/stigma free One on one/ personal Gets rid of the large organization	No "4th floor" stigma They see us by walking thru the regular health clinic We can just let them walk-in PA's walk Clt down to see us We are part of the family We are preventive, FAP is not Family intervention before crisis I think it's a really neat way to work Easily accessible	Being able to have flexibility Working ONLY directly with Soldiers coming back from deployments is great. Vietnam Vets report it is great that we are here for them right when they come back That I am a civilian That we are out of the military culture Combats fears that uniformed providers will tell their cmds

Note: Source – Army Care Manager Focus Groups, Nov-Dec 2007.

Unintended effects. When assessing program implementation it is customary to inquire about positive and/or negative program impacts that were not anticipated. The independent program site, which served at the largest military installation and had great deployment activity, reported severe overtasking. Overtasking was described as being required to work long hours to meet MEDEVAC flights, working over 40 hours per week with no compensation allowed in their contracts, and demands of trying to fill their broad mission statement of meeting the post combat behavioral health needs of combat veterans. An unintended effect of an unclear mission statement on such an active installation is that overwhelming demands are placed on the program. This, combined with reported pay parity issues (described in the next section), limits retention (another unintended effect), resulting in understaffing, rapid turnover, and further over-tasking of the remaining CMs at this installation. CMs reported the broad mission statement led to excessive roles, which at times are conflicting. An example of this is the duty of meeting medical evacuation (MEDEVAC) planes which arrive at a moments notice and conflict with the duty to provide individual therapy, resulting in canceling appointments with Soldiers already on the caseload. This, as well as prior appointments, sometimes results in CMs working until 10PM on one evening with appointments at 8AM the next morning. Years of this activity contribute to CMs being stretched too thin, resulting in fatigue and burnout. This was evident in several CM comments during the independent program focus group; one such comment is provided below:

Another negative effect is that we are just burned out. Like just before the 1st Cav left it was so stressful that you are not emotionally present for

them because you are just fried because our caseload is so huge.
(Independent Program Focus Group, December, 2007, p. 6)

When the independent program CMs were asked to rate their level of burnout on a scale of 1 to 10 (ten being the highest), four CMs reported 9, one 9.5, and two reported 10. Some CMs reluctantly reported that they are experiencing some PTSD symptoms after 2 to 3 years of serving combat veterans.

The augmentation program CMs perceived unique unintended effects at their installation. Their program was implemented under the augmentation model. Under this model they fear there may be an unintended effect of losing their prevention/outreach duties due to being so closely integrated into the program that they supplement. They describe a possible "snatch" into "psychiatric mode" which may limit their ability to conduct behavioral health classes, educate leaders on behavioral health issues, and consult with commands.

The sole provider program, with a heavy outreach and education component, also report unique unintended program effects. CMs must report prevention and education activities for administrative and workload recording/management requirements. In these cases, large and small group prevention/education must be reported individually in the reporting system. These activities are reported in the electronic healthcare reporting system (CHCS). However, the recent upgrade to this system (CHCSII or ALTA) exponentially increased the time to record each contact. CHCSII requires individual client recording of all prevention activities. Such reporting requires a minimum of 3 minutes for each person for the group training. The provider may be serving three or four

units of 250 to 300 personnel in a one month period. As a result, electronic recording of this CM's services required more time than the actual service itself. The CM reports a 1500 case service-reporting backlog because providing services takes priority over recording the prevention activity. A tremendous reporting backlog is an unintended effect of this new activity and a programming deficiency in the new electronic reporting system. This recent programming deficiency is a severe time impingement for the sole provider program site. (Table 4.13)

Weaknesses, Improvements Needed and Recommendations. The CMs were asked to identify areas of improvement/weaknesses and provide recommendations for identified issues and for general program development. At the independent program site, stigmatization of behavioral health services was identified as the most significant weakness of the program. One CM described an instance in which a leader publicly humiliated a Soldier for having an appointment with mental health. Another CM reported leaders laughing and mocking any mental health service use of subordinates. A final extreme example was described as units stalling predeployment briefings and screenings. This stalling was perceived as an attempt to impede thorough deployment readiness assessments. Leaders appeared to stall or avoid briefings to prevent access to behavioral health services which could result in behavioral health diagnoses and prevent deployments. Recommendations for dealing with this weakness were briefings/education to senior leaders. The CM supervisor at the sole provider site has a reporting agreement with leaders. If she is notified that leaders deny, discourage, or otherwise limit services, she informs their supervisor inquiring about reasons their leaders may prevent or

discourage her staff from serving their Soldiers. She reports positive results and improved access to Soldiers through this intervention.

Another problem, identified at all installations, was inadequate relationships among behavioral health providers within the complex behavioral healthcare system on the installations. On several occasions behavioral health providers from other agencies were reported as hostile toward the CMs. At an agency augmented by CMs of the independent program, CMs felt their attendance in meetings was met with hostility and their services considered of lower quality. This hostility resulted in uncomfortable work conditions, resentment, and indirectly impacted clients served. The sole provider site reported similar challenges with professional relationships between the behavioral healthcare service providers.

CMs at all installations identified needs for more resources and support. The independent program CMs perceive limitations in the contract they work under as a limiting factor of their employment. Suggestions for improvement included having behavioral health under one clinic (integrating behavioral health, social work services, the alcohol and substance abuse program, and the CMP in one location), forming focus groups or working groups among behavioral health clinic staff to air their concerns and resolve issues, and having meetings and gatherings to better integrate and unite staff of the behavioral health system.

Most CMs and supervisors expressed a desire for more program development and uniformity throughout all CMP sites. They felt that knowing how other programs were being developed on other installations could enhance their programs and encourage

development and uniformity among programs. The development of program and resource guides integrating individual program knowledge and resources was recommended. These materials could provide new CMs with such resources as flyers/advertising materials, PowerPoint briefings, and lesson plans as well as procedures to gain access to units and protocols for working with high ranking leaders.

Lastly, some CMs reported a need for orientation classes for incoming providers. This orientation should integrate new CMs into the military structure (rank system, protocol to address high ranking leaders, military protocol and structure, etc) and the organization of the Army behavioral health system. One way to achieve this orientation was to integrate providers into the family member military orientation class. Some installations reported such orientation classes for their incoming CMs, but CMs interviewed did not report receiving this service uniformly.

Closing Comments. A final opportunity for comments was provided to all participants. The augmentation site CMs reported that they felt the CMP was "doing a great job, was a really needed service for the Soldiers, and that the providers and Soldiers were fortunate that it was created" (Augmentation Site Focus Group, December 2007, p. 11). The sole provider site reported that "I feel like I am doing something really important and sometimes I can't stop talking about it" (Sole Provider Focus Group, December 2007, p. 6) (see Table 4.12). And lastly, an independent program CM commented:

We like what we do...but as contractors we feel like second class citizens and receive less pay and benefits...because of legal contracting limitations we get less perks but still have great responsibilities with our job. They (other equally qualified licensed clinical social workers working on this installation) have parties we can't go to; they get rewards we are not

eligible for, and receive far more monetary compensation. We have no Employee Assistance Program. It is really upsetting. We do like what we do and take a pay cut because we like the service we provide. That doesn't mean we like it. This is kind of the heart of every social worker.

(Independent Program Focus Group, December 2006, p. 11)

Table 4.13 Unintended Effects, Improvements, Final Comments of Focus Group Participants

	Independent Program	Augmentation Site	Sole Provider
4. Unintended Effects	Over tasking of CMs We end up taking on everything Too many roles & conflicting roles Hard to make appts w/ MEDAVAC spt unpredictable and mandatory Stretched too thin Burnout is an Unintended effect	Losing prevention piece Being snatched into BH Into "psychiatric mode" May lose ability to do education/prevention piece Roles shifting to direct service	The coding problem into CHCSII Coding briefings takes longer than the briefing itself
5. Improvements Recommended	Needs resources/ more support Pay Parity, make GS job Stigma is the biggest weakness Stigma and leader intimidation Education and collaboration with units to combat stigma CMs believed to make 15000 less annually than GS peers Less resources and supports b/c contract job Need services for provider fatigue Work on interagency discord CMs feel unwelcome with some MH agencies they augment	Better resourcing support We need time with FRGs Have program resources or manual, marketing materials But MEDCOM Brochure was great Better communication about overlapping programs Orientation is needed, Could be integrated w/ FRG Yearly meetings More info on MEDCOM mission intent would be helpful	Better connections between what I do & behavioral health Referrals are hard File sharing between agencies Personal relationships between us and mental health would be great Hiring a coder/making the Reporting/coding system better I have a full week of briefing reports to input (1500 clts) Have MH under one roof, but may not be possible
6. Closing Comments	Program works but we are Overtasked Very successful, but we do way too much	Great job, really needed, we are fortunate that it was created Contract compensation is great Christina is a great contractor	I feel like I am doing something really important Sometimes I can't stop talking about it

Note: Source – Army Care Manager Focus Groups, Nov-Dec 2007.

Research Question 1: To what extent is the Care Manager Program (CMP) implemented as intended? The CMP was implemented as one of several additional Army behavioral health programs to enhance services to Soldiers and their families. The CMP

focuses on outreach, screening, referral and providing direct services to Soldiers and their families with deployment related issues. Answering this final question requires integrating findings from all other research questions to provide an overall impression on the extent to which the program was implemented as intended. Soldier self-report data, CM activity and opinion/perception data, and program development information were synthesized to address this overarching research question. As introduced in the literature review, the CMP is one of many mental health programs integrated into a new medical risk management model. This model follows an aviation risk management method of overlapping and repetitive checks. In the case of the CMP, it provides another door to help and treatment. This repetition is predicted to increase problem identification, reduce accidents, and increase proficiency. In the case of the CMP, it increases proficiency at reaching those in need. The CMP is one program in this system of overlapping services. The program was implemented to augment existing services and provide an additional assessment and service agencies to Soldiers and families vulnerable to serious conditions after Soldier combat stress exposure.

The CMP appears to be accurately implemented to serve those in the deployment cycle and with deployment-related issues from the three installations evaluated. This is evident through focus group and interview data that verifies that these are the clients being served. The CMs verify that they have maintained a focus on combat veterans and their families. Comparisons of Soldier self report data and CM activity verifies that vulnerable service member categories (as enlisted, male, and White Soldiers) are receiving services and their conditions are being treated. Some concerns with categories

of Soldiers and their conditions were identified as vulnerable areas in the program. Senior Officer leaders was a category of Soldiers identified as vulnerable. These areas may then need further assessment and services. Overall however, this program appears to be serving the targeted population and providing services to combat veterans and their families.

Three individual program implementation models (independent, augmentation, and sole provider) were discovered and their ability to serve the target population analyzed. Although implemented in very unique manners, each program maintained combat veteran focus and identified, screened, and served target populations. Provider morale and satisfaction is a program implementation goal as well. CMs at all installations studied reported high morale, several areas of concerns, and considerable provider fatigue. Overall, all CMPs appear to be implemented as intended, serving their target populations and addressing target issues. Chapter VI provides an in-depth analysis of these results to include discussion, implications/ recommendations, and areas of future research subsequent to this study.

CHAPTER V

DISCUSSION AND IMPLICATIONS

The final chapter of the dissertation provides a discussion of and platform for understanding and applying the results of the study. The chapter is divided into five sections. The first section is a discussion of the research questions. The next two sections cover implications, both for social work policy and practice followed by specific program recommendations. The final two sections address methodological limitations and highlight recommendations for future research that can build on this study's findings.

Research Questions Discussion

1. To what extent is the Care Manager Program (CMP) implemented as intended?

Several theoretical factors influenced this assessment of the extent to which the CMP was implemented as intended. The first theoretical factor was that the CMP was developed to fill a gap in services to Soldiers and their families. This program was designed to supplement existing programs with restricted target population (deploying Soldiers), specified behavioral health issues (those with for deployment-related issues), and enhanced availability and outreach. The CMP was developed to be less invasive/more available and easier for Soldiers to access than existing Army behavioral health programs. Complementing these goals, the CMP was designed using an aviation safety program model which incorporates multiple overlapping programs to identify and treat problems so that everyone in need receives services. Under this model, the CMP is intended to provide additional screenings and treatment for behavioral health problems

not identified by other assessments. Lastly, the program was implemented under a decentralized, local leader philosophy, referred to as mutual adaptation. This decentralized philosophy is tolerant of differences in programs for local needs application.

Overall, the CMP appears to be implemented as intended across the installations studied despite different implementation models. Most sites maintained a unique/independent program (independent program or sole provider techniques). However, some CMPs augmented preexisting mental health programs while maintaining their mission focus (as was the case with the augmentation strategy). This strategy was vulnerable for absorption into the missions of the agencies they supported. This absorption threatens to eliminate the redundancy, or repetitive check safety philosophy programmers were pursuing to ensure that Soldiers did not fall through the cracks of the military behavioral health system. Regardless of the integration level, CMs all reported during focus groups that the mission focus and forward placement of providers was maintained. At some point programmers must decide the extent to which redundancy is necessary. Future investigation may be necessary to evaluate this possibility.

2. *To what extent is the Care Manager Program (CMP) reaching the target population?* The CMP appeared to be successful at reaching the target population. Although females were treated at a statistically higher rate than their presence in the target population, the percentage difference was minimal. Eighty-five percent of those receiving treatment are male, 15% female. These results indicate that females represent 4% more of those receiving direct treatment than their percentage of the deploying

population. This heightened rate may be understandable due to previous research revealing that females are more likely to report conditions and seek treatment. In addition, females, as the minority gender in the military, may be predisposed to other stressors associated with discrimination. Women's contact with counselors and their display of help seeking behavior may also be more normalized compared to men. In turn, some gender role expectations may make it very difficult for men to seek help as they are expected to be stoic and independent. As a result, the target population in regards to gender breakdown appears to be adequately reached.

The CMP did an excellent job targeting enlisted Soldiers, as they comprised 95% of those treated and are the largest group within the deploying force (representing 86% of those deployed). Subsequently, a majority of the population exposed to combat stressors is being served by the CMP. It was noted, however, that senior enlisted Soldiers (noncommissioned officers) have the highest rate of deployment and the highest exposure rate to combat stressors, yet they report feeling less danger, and far fewer depression symptoms, and have lower rates of treatment. Enlisted leaders comprised 39% of those treated by CMs, a substantial treatment rate, however, it is still disproportionately lower compared to their combat exposure. Furthermore, enlisted leaders remain slightly under represented among those treated.

Regarding rank, there was an unexpected spike in O5's (Lieutenant Colonel, (LTC), senior leaders) receiving treatment. Although this was a low number (n=23), this spike in services may indicate a subpopulation of senior officer leaders that would benefit greatly from services. Additionally, this phenomenon was not reflected in the enlisted

rank of E9, Command Sergeants Major (CSM), who work along side these senior officers. Perhaps then, years of experience could be a potential protective factor as senior enlisted Soldiers (CSMs) generally have several more years in service than LTCs and may very likely already have participated in combat deployments. Although beyond the scope of this study, the phenomenon could be understood under a theory of survivor guilt exacerbated by the leadership decision responsibility of placing those killed or injured in the situations that hurt or killed them. With heightened awareness on the part of the CMs and other providers, outreach and assessment could be strategically placed within consultations for subordinates. However addressed, it should be underscored that senior officers have an unmet need for treatment in the rank of Lieutenant Colonel. Further investigation could better explain this phenomenon.

The statistical analyses of the target population on the PHDA in regards to ethnicity revealed interesting trends. Whites reported significantly higher combat stressor exposure, but reported significantly lower help seeking behavior and mental health issues, particularly depression. Blacks appeared to have the opposite reporting trends of the white participants. Blacks were significantly underrepresented in combat stressor exposure yet over represented statically on mental health issues. Many factors may influence these findings. There may be a relationship between their job positions across race that affects the rates of combat exposure for instance. Although understanding this inverse response rate relationship is beyond the scope of this study, there are key issues to discuss. First, White Soldiers should receive treatment at an adequate rate, however if they do not report behavioral health issues when surveyed they

will not be referred to screening. Furthermore, if they do not report issues it is very likely that they will not seek treatment. This ethnic analysis of the target population fell short on their representation in treatment. Ethnic background was not recorded consistently in the Medical Department Electronic Reporting System. Therefore, although Whites are highly exposed to combat stressors and underreport mental health concerns, it became beyond the capabilities of this study to evaluate the military behavioral healthcare ability to reach these sub-population at the highest Army levels. This data is available, however, in local files for individual installation assessment in future studies.

In summary, this study reveals that the CMP does reach the target population. However, enlisted leaders may benefit from heightened screening and interaction/intervention. In addition, there seems to be a subgroup in the rank of LTC that likewise could benefit from heightened, and possibly informal, intervention.

3. To what extent is the Care Manager Program (CMP) addressing the target issues?

Soldiers were screened for PTSD, depression, risk issues, and their desire for behavioral health services. Despite the expected under reporting of issues, 22% of respondents identified depression issues, 11% identified PTSD symptoms, and 10% risk issues. Furthermore, 6% of respondents indicated an interest in behavioral health assistance.

Of those monitored during the six-month period, the CMP direct services dedicated 20% to PTSD diagnoses and 10% to mood issues, 29% were recorded as general counseling and 22% as adjustment reactions. Although there were twice as many depressive issues than PTSD symptoms reported, depression related conditions were reportedly treated half as frequently. The military healthcare system, as well as

national public education, has made great efforts to de-stigmatize the posttraumatic effects of war. This may be evident in the higher rate of PTSD treatment in CM healthcare reporting. Although PTSD treatment seems frequent by comparison, the actual report rates of soldiers are much higher for depression symptoms, at twice the rate. This standard rating system used in the PDHA Soldier self-assessment measure does have some limits. Depression, related to catastrophic outcomes at times (suicide in particular) has a lower threshold for positive screening than the items measuring PTSD. For instance, one of 4 positive depression items constitutes a referral for depression, while 2 symptoms of PTSD result in such a referral. This more sensitive threshold may then be driving the higher rate of depression symptom reporting than PTSD. Regardless, this study concludes that the CMP is reaching the target issues identified by Soldier self-reporting.

Actual treatment issues may be obscured for a number of factors. Standard clinician annotation techniques and limitations at the Medical Department level of reporting may obscure actual conditions being reported. Clinicians are trained to diagnose conservatively to prevent hasty and loose diagnostic routines, and CMs were found to use such loose diagnoses, as general counseling and adjustment reactions. Furthermore, particularly in the case of depression, some depressive symptoms can be accurately applied to adjustment reactions due to hardships of life. In these cases it is clinically prudent to use a general diagnosis rather than a possibly stigmatizing Axis I diagnosis, particularly necessary in the early stages of symptoms. These general reporting practices could obscure the treatment rates of depression symptoms, PTSD, and other behavioral

health conditions for this large scale study. This reporting was not predicted and could not be investigated through the data used in the study.

Secondly, the vast electronic healthcare reporting system of the Army Medical Department is not capable of maintaining more descriptive accounts of conditions. This electronic system is designed to minimize recording time and avoids in-depth descriptions of conditions. This too, contributed to the challenges in categorizing general counseling and adjustment reactions diagnoses symptomology. Local assessments, however, can evaluate CM documentation rather than broader diagnostic trends in the electronic reporting system of the Army Medical Department. This issue will be discussed in greater detail later in this chapter.

4. How is the Care Manager Program (CMP) implemented at various installations?

Local CMP implementation was found to fall under 3 unique programming styles. The unique styles, independent program, augmentation force, and sole provider, resulted in different strengths and weaknesses across the CMP.

The group of sole providers were too low in numbers to be an independent program and also too unique to be readily absorbed into other agencies. Their uniqueness, newness, and small size resulted in isolation and some challenges in becoming integrated into the installation behavioral health system. At times consultations were challenging and their positions hard to understand with their colleagues. It was not unusual for other behavioral health professionals to question the CMs consultations and referrals and express confusion with their positions. Work is then necessary to bridge this separatism for more fluid services as well as the development of positive work

environments throughout the behavioral healthcare system. For this to happen it is critical that senior leaders prioritize integrating CMs into the behavioral healthcare system. Although it may be a low priority to senior leaders, minimal acknowledgement and management can resolve much of the confusion and/or separatist attitudes that may develop through a lack of understanding and appreciation of the role of the CMP in the behavioral healthcare system. It is then necessary to address territorialism in the provision of behavioral health services. Since senior behavioral health leaders are in the position of most influence of installation behavioral healthcare, this may be the best group to initiate further develop in this area.

CMPs implemented as independent programs seem to maintain their mission focus and also have power in numbers. This program had clear sub-programs they maintained. Unique programs were developed, with advertising campaigns, to better serve their target population and the target issues. One example of this was the telephone care line that provided quick and anonymous information for conditions related to deployments. This program had public service advertisements on local media services as well as pamphlets. The size of the program allowed for resourcing for this program development as well as empowered them within the installation behavioral health system.

This site, however, also experienced continually high rates of Soldier medical screenings and intense post-combat services. The installation is one of the most deployed and houses a high rate of infantrymen and aviation assets. These challenging work conditions produce unique work dynamics where CMs report both high levels of burnout and job satisfaction. These CMs reported job satisfaction at a 10 and burnout at a 9 (on a

scale of 1 to 10, 1=lowest; 10=max). These CMs, like the others, were extremely enthusiastic about their jobs, highly committed and motivated to the CMP mission, and not interested in leaving their jobs. They did, however, report high rates of fatigue/burnout due to working long hours, receiving lower pay than equally qualified social workers in other programs, and receiving poor health insurance. They did not want the hours or duties to change; they enjoyed their jobs, understood the need for their extended hours, but requested some parity considerations in regards to the perks of their positions. If nothing else, healthcare insurance that could address provider fatigue and secondary trauma issues for CMs seems appropriate and deserved. Most desired was to become a Department of the Army full time civilian employee. This would provide job parity with other installation therapists and full health benefits.

The augmentation implementation style of the CMP was used at the medium sized active duty installation. This approach integrated the CMs as necessary into pre-existing behavioral health programs across the installation while maintaining their unique mission. A benefit of this style was that it strengthened the current behavioral health system. This style maintained the current behavioral health system and enhanced them with CMs that were identified to serve the target population. This style reduced interagency resistance by not creating new programs that take time and work into the behavioral health system. Initially logistics were simplified. Buildings, office supplies and support staffs were not needed. Rather, the gaining agencies merely had an extra staff member to integrate. As a result, management overhead was reduced, proficient resourcing systems were used and agencies received extra staff. However, CM

management became an extra duty for the selected supervisor and the resourcing strained the programs they were assigned. This style maintained the current mental health system and tried to avoid complicating the existing behavioral healthcare system by not adding another program. However, this implementation strategy produced internal tensions within the agencies they were added. The CMP program manager was strained with this as an extra duty. Supervising CMs actually assigned to other agencies was difficult. A second source of tension was that funding mechanisms did not support the CMs within the agencies that they augmented. This lack of funding resulted in strains on the agencies they supported. Although the augmentation style of CMP implementation successfully achieved the CMP mission, administrative and financial complications were identified as a weakness of this technique.

Local behavioral health leaders have been creative and diligent in implementing the care manager program as can be seen in the three techniques used in implementing the CMP. Interviews and focus groups with CMs and CMP supervisors identified the unique activities CMs used to meet the needs of Soldiers. The largest and highly deploying installation (the independent program) created an anonymous care line to provide services to hesitant clients. A second installation modified psychoeducation and outreach to small group process/education sessions for post-combat Soldiers. A third installation enhanced their outreach and education and tailored much of their program into a "family practice" style of services where consultations felt very personal. All programs, through creativity and diligence, were able to simplify existing services and create innovative services according to the needs of combat veterans and the requests of

Army leadership at their installations. Whether the decision was to design an independent program, augment preexisting programs, or integrate a small asset as appropriately as possible, all styles molded well to the mission and goals of the CMP.

5. How do installations and implementation venues of the Care Manager Program (CMP) differ in their ability to serve the target population? The degree to which each CMP was able to reach the target population and address target issues was unique across installations, yet each installation appeared to reach the target population in terms of gender and rank. Gender breakdown for those treated across the installations was between 81% and 86% male. The independent program site, located at the largest installation evaluated in this study, had the highest male treatment rate (86%). The sole provider program site, serving many National Guard and Reserve Soldiers at redeployment, had an 85% male treatment rate and the augmentation force site, which was a medium sized active duty site, treated 81% males. Both of the active duty sites are heavy combat arms installations; however, the augmentation force site has a heavy infantry-training mission. This training mission may increase TDA assignments (non-deploying Army units, in this case Training and Doctrine Command-TRADOC) that had a large support (non-combat) staff. This TRADOC staff may have increased the number of female Soldiers and increased their rate of service. Awareness of the augmentation site lowered male treatment rate should be noted for clinical practice and addressed in the management of all behavioral health services at this installation.

There was little difference in the ability of CMPs to reach the target population by rank. Enlisted Soldiers received the majority of treatment and senior enlisted treatment

fell among all CMPs despite the fact that they represent more of those deployed. Uniformly, enlisted leaders do not seek treatment at rates that lower enlisted Soldiers do. This is despite the fact that they were in direct combat more often. Senior enlisted Soldiers are highly exposed to combat exposure stressors, yet seek treatment at lower rates. This universal phenomenon should be addressed Army wide and not merely as a local issue.

Treatment rates for diagnoses were unique across installations and limited by electronic reporting procedures. The independent program site treated PTSD at the highest rate (27%), which accurately reflected the intensity of activity of the Soldiers they treat. The units of this installation are high combat arms and deployed during the heights of combat activity during the GWOT. The second active duty installation, the augmentation force site, is the home of combat arms, but deployed to Iraq mainly during the initial phases of the war and experienced less combat stressor exposure than the previous site mentioned. Currently, they are preparing for new GWOT deployments. As expected then, PTSD treatment is lower than the first site as well, at a rate of 7%. Lastly, the sole provider site, which is a support installation and served National Guard and Reserve Soldiers, treated PTSD at the lowest rate of 3%. This too, can be expected because this installation was not combat arms and the National Guard/Reserve Soldiers disperse to their states of origin after their initial screenings at the installation. At that point another military program serves their needs.

There were different treatment rates for mood disorders across the installations studied. Within the independent program installation, depression was treated in 10% of

their cases, and at a rate of less than half of PTSD. The augmentation site, which had experienced less trauma, treated a higher proportion of depression (13%), and 2% of those treated at the sole provider site had a primary diagnosis of mood disorders. Each installation appeared to have a general coding system to defer axis I diagnoses. This was evident in the use of general counseling (25%), adjustment disorders (18%) deferred/blank diagnoses (16%). These general codings have value in mental health service provision, but may have skewed this analysis, masking depression, PTSD and other mental health conditions. As stated earlier, local installation evaluations of case files can overcome this limitation.

Although the diagnostic breakdown does appear unique among installations, as discussed above, the differences are understandable due to the combat stressor exposure of the individual installations target populations and the status of Soldiers served (active v. reserve status).

6. *What are the perceptions and attitudes of Care Managers (CM)?* The perceptions, attitudes and opinions of CMs were assessed in three focus groups and supplemented with supervisor semi-structured interviews. This provided rich descriptive information about the program as well as development of recommendations. Overall the CMs morale was high and they felt the program was very important in reaching Soldiers and their families and providing services to them.

CMs report strong mission focus and embedded services that were more easily available to Soldiers compared to traditional services. Each installation took great care to place CMs well out of the mental health system and close to units. This was seen as a

great strength of the program, however, at the augmentation force site it noted that a "mission creep" may occur, moving toward direct services and thereby limiting time and resources for outreach and prevention. This could limit the scope and intention of the CMP at *this* installation. Guidance is necessary to inform this and all sites as to whether this is a desired program outcome, or if scheduling for prevention and education should remain a priority and become structured into their program to preserve this goal.

These licensed clinical social workers have been hired to be the "far forward" civilian asset serving war veterans. These providers are screening and treating a very vulnerable population. CMs also must meet Soldiers as they return from war on medical war evacuation flights (MEDEVACs) which arrive at any hours. This resulted in overtime hours which can extend past midnight. Currently, their employment contracts do not recognize these extra hours. This too creates stressful conditions for the CM. Burnout and provider fatigue results from the client population served, exposure to extreme secondary trauma, and unconventional work hours. It is essential that services be made readily available for these providers to receive counseling and decompression from the stressful services they provide. There are numerous creative ways to provide this, but it is key to acknowledge the intensity of CM duties and our responsibility to the providers that serve this vulnerable population. One respite may be a contract that allows a flexible work schedule. Within this work schedule CM may benefit from some 4-day workweeks, particularly when MEDEVAC missions come in workdays extend to 14 hours per day. Ensuring the contract supports consultations for providers is necessary as well. If this is not feasible in the near term, group or individual sessions with a

"disinterested" senior therapist on the installation is necessary to ensure the health maintenance of these providers.

Pay issues as well is an important factor of job satisfaction. In the case of the CMP, there is a reported pay disparity between them and other providers with the same qualifications. Considering Department of the Army employee status could improve pay disparity, remove third party contractor expenses, and lift insurance inequities and workweek hour restrictions. Strong movements toward this full time DA status could resolve many difficulties reported by the CMs.

Lastly, glitches in the revised electronic provider activity reporting system make reporting and crediting prevention services lengthy and at times unfeasible. This glitch should be addressed to programmers to make activity reporting seamless.

The CMs report much pride in their jobs and understand the value in new and unconventional ways to reach Soldiers. This qualitative data verified program usage and revealed strengths and weaknesses in the program.

Implications and Specific Recommendations

Policy Implications. The results of this study have important implications for future policy development. These implications range from implementation/monitoring to usage strategies. First, the study results indicate that implementing a program with broad goals and laissez faire management styles results in policy ambiguity. However, in some cases, this policy ambiguity allows for creativity and freedom. The large installation Care Manager Program Care Line is one such example. This program was centrally developed to allow Soldiers and family members who want anonymity to inquire about, obtain, and

use services. This service is not provided at any other installation and was creatively developed and marked with flyers and advertisements to prevent those in need from falling through the cracks.

This kind of creativity was also apparent at the "sole provider" installation where the caseload was restructured to meet the desires of senior leaders who wanted redeployment briefings to be conducted in small groups of 12 to 30. Through a loosely controlled program, the sole provider program responded to leaders' requests and provided this service. This was evident in the number of prevention briefings made by the sole CM at this site.

In other cases, however, flexibility resulted in ambiguous objectives which produced unachievable expectations. In some cases, a vague mission statement with unspecific objectives, led CMs to confusion about the scope of their job. Furthermore, the implications of unclear objectives have resulted in very different programs at different locations. This also creates difficulty in measuring the degree of mission accomplishment for CMs, as outcome goals have not been clearly established. Although the intent of the CMP seemed clear to providers, vague policy with laissez faire leadership resulted in unclear expectations, mission creep, interagency misunderstanding, boundary disputes, and some lack of employment security on the part of CMs.

CMs do not have job security and Department of Defense (DOD) employee benefits. Despite the fact that the program has existed for approximately 4 years, CMs currently operate on a contract basis and some CMs report that unintended consequences of their work status include "feeling like step children" or being "second class." This

dissatisfaction was also revealed in reports of lower health care services, disparity in pay and rewards systems, and less flexibility in their hours in comparison to social workers in DOD positions. There is a lack of services and psychological support for CMs experiencing fatigue and secondary trauma even though their position places them at extreme risk for these conditions. Such disparate conditions exist while many CMs reported longer working hours and lower salaries than equally qualified DOD counterparts. This contributed to job insecurity and dissatisfaction with benefits.

It must be underscored that these conditions did not contribute to stated desires to leave the job (or change to a DOD position). This is partially because CMs perceive the CMP as vital for treating Soldiers and their families. The CMP appeared to be a civilian equivalent of “front line” or “far forward” services to war veterans and a greatly needed niche in the mental health services provided in the Army. Nonetheless, the implications of contractor positions being held past five years include pay and services disparity to long time employees and providers of critical behavioral health services. The solution to this may be a push to make the CMP employees permanent Department of the Army civilian positions.

A final policy implication weighed heavily on the urgency of program implementation at assessment and failure to catch up with policy development. CMs reported policy ambiguity and desires for a guidance manual for providers. This could be addressed by reserving slots at the bi-annual centrally funded Army behavioral health short course 5-day training. Two or three of the numerous breakout sessions could be reserved for CMs where these issues could be addressed. In addition, a CM document

committee could be established to work together to create a CMP manual. CMs could also bring electronic copies of their individually developed resources. An electronic library of resources could then be developed, distributed at the conference and posted on the website. Furthermore, the extensive Army Community Services “Operation Ready” counseling resource guide could be distributed as a training resource.

Practice Implications. This study revealed several implications for practice for the CMP and other behavioral health services in the Army. One such implication is that even though depression symptoms had the highest reporting rate, treatment for depression was low in comparison. Data indicate that some destigmatization of PTSD has occurred in the military, leading to higher rates of treatment and reporting among those hardest to serve (NCOs, lower enlisted) services. However, mood disorders were reported at twice the rate, yet treated at half the rate of PTSD. PTSD education, destigmatization, and treatment appeared to have made some advances, but depression treatment and education may need heightened attention.

Prevention services seemed to be effective across all installations studied. CMs were able to integrate prevention/outreach and education services into their practice among all three sites studied. There were some inquiries made regarding whether the Army Medical Department prioritized such services, however. The implications of ambiguity on these issues include disparate services and priorities across installations, and a lack of prioritization of tertiary services, outreach, prevention and education.

Contributing to the possible elimination of prevention services is the inability of some CMs to enter this activity into the electronic healthcare reporting system. The

military electronic health reporting system drives and substantiates workload activity, justifying worker positions, and ultimately the staffing rates at installation. By not providing coding options, healthcare accounting systems devalue preventive services, exacerbate emerging conditions, and inhibits outreach and education to support systems. One installation, Ft Polk, has been successful at developing a time intensive, but effective method of crediting this prevention service. Note that this was the installation where senior leaders requested intense prevention and education be provided to their services. It is then necessary to establish the intent of CM services and provide a universal and timely method of reporting the services in the healthcare system.

Limitations

This multi-method, triangulated study involved the integration of several secondary quantitative data sources and qualitative data sources. It's not unusual to encounter challenges when using secondary data and this study was no exception. One challenge was that PDHA data provided by the Department of the Army was only made available in the form of aggregate summary rather than specific case data. This limited the options for statistical analysis in this study. Also, CM service records did not include the ethnicity of clients, disallowing an examination of differences among ethnic groups.

This overall program evaluation was further limited by constraints of data reporting in the medical department. In addition, clinical outcome descriptions were not available in the Army Medical Command electronic reporting, and some vague diagnoses weakened diagnostic rate analyses while dispositions were not well documented. These

limitations can be overcome, however, through local record analysis and are necessary in protecting the privacy of clients and maintaining their receptivity to treatment.

Future Research

Directions of Future Research. Implementation-process evaluations are necessary initial components of the cycle of program evaluation that establish the actual program in place. These evaluations verify the actual program and provide a type of program baseline for future research. For essential service evaluation, outcome studies are then possible.

Future research for the CMP should emphasize outcome studies on individual installations. Numerous evaluation designs would be appropriate for outcome studies of the CMP. One such study should include outcome evaluation within the CMP, evaluating outcomes and length of care by conditions treated. Designs could also include experimental and quasi-experimental studies comparing treatment outcomes for CMP clients and those using other mental health services on installations. Regardless of the design, as emphasized by the Deputy Surgeon General, bringing the best services to those participating in combat is essential and this includes evaluating and developing the programs in place. For these reasons, outcome studies of the CMP are priority directions in future research.

Research investigating the unexpected findings of this study is a second area recommended for future research. Future research investigating the disparity of senior enlisted Soldiers (Noncommissioned Officers) in combat stressor exposure and interest in assistance and reporting of mental health issues is necessary. It is recommended that this

investigation be stratified by race and gender as well, particularly to investigate the inverse statistical relationship across PDHA items among Whites and Blacks.

Another recommendation for future research is to incorporate the PDHA follow-up assessment (PDHRA), now in its pilot phase, into studies. The PDHRA is a reassessment of Soldiers returning from war at the 90 to 180 day window. Both assessments combined would establish a multiple baseline, as well as reveal symptom manifestation over time. When used in outcome studies at individual installations, a cycle of symptomology, reaction to treatment, and services provided can be assessed. This research would be groundbreaking because symptom manifestation in real time for combat veterans has never been monitored prior to the GWOT. For practice purposes, this combination provides an integrated database of available client data therefore allowing for a more holistic understanding of both the client and the condition.

Further investigation into the high reporting of depression symptoms but lowered treatment of the condition is also critical. Depression symptoms were identified at the highest rate, but mood disorders were treated infrequently by CMs. Investigations with recommendations for treatment and outreach development are then necessary in the future to increase the quality of life for combat veterans and their families as well as to decrease the rare likelihood of catastrophic (suicidal) outcomes for our veterans with symptoms of depression. Furthermore, effective early diagnosis and treatment can prevent such occurrences. Local installation individual file assessment can also better determine the true rate of provided treatment and prevention of depressive symptoms.

A last recommendation in future research involves the spike in O5 leaders, Lieutenant Colonels in mental health treatment for the CMs studied. This spike indicates a vulnerability that may have been unidentified previously and whose treatment can increase the quality of senior leadership as well as have a valuable impact on the thousands of subordinates they serve under them.

Conclusion

The Care Manager Program was an innovative program developed to improve services to Soldiers who have participated in levels of combat not seen in recent years. It was timely and essential to assess the program. The providers and supervisors welcomed the assessment, openly provided information and documents, and eagerly invited findings and recommendations for change. It is often underscored within the discipline of social work that the way to best serve the target population is through a continued cycle of program assessment and development. It was the purpose of this dissertation to provide the baseline and implementation/process information to understand the CMP in place across installations. This study provided this understanding, verifying the CMP's ability to reach the target population and address the issues critical to Soldiers returning from war across implementation techniques. Throughout the study, this researcher noted that the CMP providers were dedicated to serving combat veterans and their families. This study reveals that their efforts are effective at reaching combat veterans and serving their post-combat needs.

APPENDIX A

Post Deployment Health Assessment Mental Health Specific Questions Sections

POST-DEPLOYMENT Health Assessment DD FORM 2796, APR 2003

Authority: 10 U.S.C. 136 Chapter 55. 1074f, 3013, 5013, 8013 and E.O. 9397

Principal Purpose: To assess your state of health after deployment outside the United States in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care to you. Routine Use: To other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment. Disclosure: (Military personnel and DoD civilian Employees Only) Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

INSTRUCTIONS: Please read each question completely and carefully before marking your selections. Provide a response for each question. If you do not understand a question, ask the administrator.

7. Did you see anyone wounded, killed or dead during this deployment?

(mark all that apply)

Yes - coalition

Yes - enemy

Yes - civilian

No

8. Were you engaged in direct combat where you discharged your weapon?

Yes (land sea air)

No

9. During this deployment, did you ever feel that you were in great danger of being killed?

Yes

No

10. Are you currently interested in receiving help for a stress, emotional, alcohol or family problem?

Yes

No

11. Over the LAST 2 WEEKS, how often have you been bothered by any of the following problems?

Some A Lot None

Little interest or pleasure in doing things

Feeling down, depressed, or hopeless

Thoughts that you would be better off dead or hurting yourself in some way

12. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST OMNTH, you

No Yes

Have had any nightmares about it or thought about it when you did not want to?

Tried hard not to think about it or went out of your way to avoid situations that remind you of it?

Were constantly on guard, watchful, or easily startled?

Felt numb or detached from others, activities, or your surroundings?

13. Are you having thoughts or concerns that ...

No Yes Unsure

You may have serious conflicts with your spouse, family members, or close friends?

You might hurt or lose control with someone?

APPENDIX B

Care Manager Prevention/Education Monthly Activity Report

Month _____ CM Prevention/Education Monthly Activity Report Name _____ Installation _____ Work Site _____									
INSTRUCTIONS: This brief monitoring sheet records prevention/education/outreach Care Manager (CM) activities to AMEDD Behavioral Health Division (BH). Each CM should submit monthly electronic totals NLT 7-days after the end of each month through the BH AKO Website. P.O.C. is CPT Henderson (Gill.henderson@us.army.mil) or Dr. Robichaux (Dana.Robichaux@amedd.army.mil)									
Briefings									
Briefing Title	Total Briefgs	Total Clients Served	Number of Type of Client Srvd (Unit and CMD see below) (FM=Fam Mem; AG=Agencies) (Other =other/decribe in notes)						
			Unit	CMD	FM	AG	Other		
Pre-Deployment	0	0	0	0	0	0	0	0	
Post-Deploymnt	0	0	0	0	0	0	0	0	
Normalization of experiences	0	0	0	0	0	0	0	0	
Family Reunion	0	0	0	0	0	0	0	0	
Stress Mgt	0	0	0	0	0	0	0	0	
Depression Mgt	0	0	0	0	0	0	0	0	
PTSD Mgt	0	0	0	0	0	0	0	0	
Other: Plz fill in:	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
TOTALS:	0	0	0	0	0	0	0	0	
Notes: Unit is unit briefings-Battalion, Co., Platoon, Squad, etc CMD is command briefing, i.e class at leader development.									
Support Groups									
Topic of Group	Total Groups	Total Clients Served	No. of Type of Client Served (Sold=Pvt-Spc, LDR=NCOs & (or Officers; FM=Fam Membrs) (Other=other/decribe in notes)						
			Sold	LDR	FM		Other		
Medical Seprtn	0	0	0	0	0	0	0	0	
Mil. Separation	0	0	0	0	0	0	0	0	
General Adj	0	0	0	0	0	0	0	0	
Injury Adj.	0	0	0	0	0	0	0	0	
Family Adj.	0	0	0	0	0	0	0	0	
PTSD	0	0	0	0	0	0	0	0	
Depression	0	0	0	0	0	0	0	0	
Stress Mgt	0	0	0	0	0	0	0	0	
Other: (fill in)	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
Totals:	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	
Notes: (Sep=Separation)									
Command Consultation									
Total Consultations	Total Clients Served								
0	0								
Notes:									
Care Line Contacts									
Type of Clients	Total Served								
Soldiers	0								
Family Member	0								
Other:	0								
	0								
Total:	0								
Notes:									
Outreach/Advocacy									
Type of Clients	No. of Contacts	Total Served							
Soldiers	0	0							
Commands	0	0							
Family Member	0	0							
Agencies	0	0							
Other:	0	0							
	0	0							
	0	0							
Totals:	0	0							
Notes: Describe Outreach Activities									
Comments and Other Activities:									

APPENDIX C

Care Manager Focus Group Semi-Structured Questions

Please write narrative responses to the questions below:

1. What are the strengths of your program?
2. What are the areas that your program may be strengthened?
3. Are there any unintended negative effects of your program?
4. Do you have any suggestions about how to address these unintended effects?

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